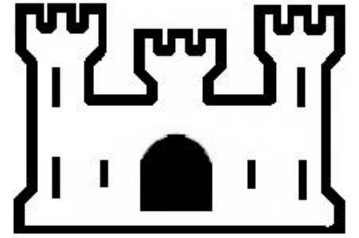


**US Army Corps  
Of Engineers  
Southwestern Division  
Reservoir Control Center**

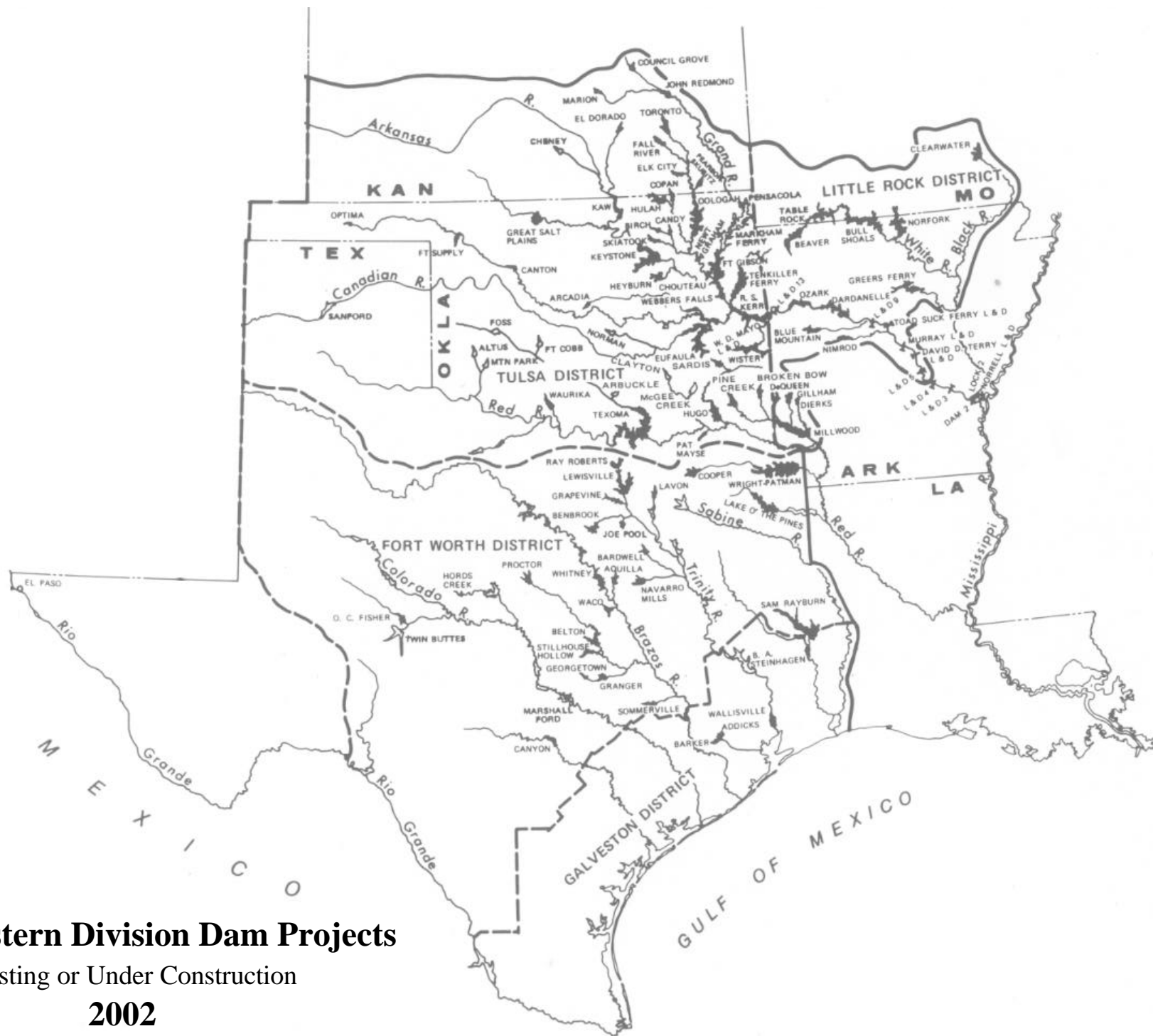


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# **FY 2002 Annual Water Control Report**



**April 2003**  
**FOR OFFICIAL USE ONLY**



## Southwestern Division Dam Projects

Existing or Under Construction

**2002**

(With Section 7 Flood Control Projects Added)

**FY 2002**

**ANNUAL WATER CONTROL REPORT**

**RESERVOIR CONTROL CENTER**

**SOUTHWESTERN DIVISION**

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**SECTION I**  
**INTRODUCTION**

## SECTION I – INTRODUCTION

1. **PURPOSE OF REPORT.** This report presents activities and accomplishments of the Southwestern Division (SWD) as related to reservoir regulation and water management activities throughout FY02. Detailed summaries of reservoir conditions are also included.

This report is prepared in conformance with ER 1110-2-1400, 30 September 1993, Reservoir Control Centers.

2. **REFERENCE.** Reservoir Control Center (RCC) - SWD Guidance Memorandum, dated June 1971, approved by the Chief of Engineers as a general basis for the RCC's activities.
3. **OBJECTIVES OF THE RESERVOIR CONTROL CENTER.** The SWD RCC was established in 1967 by the Chief of Engineers to improve capabilities of the Corps of Engineers to perform its civil works mission as related to operation of reservoirs. The SWD RCC carries out its responsibilities by:
  - a. Organizing coordinating committees and/or participating in committees to accomplish mutual understanding among water interests regarding use and regulation of water resources.
  - b. Providing interbasin coordination of day-to-day regulation needs for river systems for all purposes.
  - c. Surveillance of daily operations and continuous analysis of project needs.
  - d. Furnishing technical assistance to personnel of District offices in related efforts to improve the reliability of regulations and hydrologic determinations.
  - e. Provide management and technical guidance for the development and operation of the Division-wide dedicated water control data system. This system includes the equipment and software used for the acquisition, transmission and processing of real-time hydrologic and meteorological data for the purpose of regulating projects for which the Corps of Engineers has responsibility.

## **SECTION II**

### **WATER CONTROL ACTIVITIES IN SWD**

## SECTION II - WATER CONTROL ACTIVITIES IN SWD

### 1. RESERVOIR REGULATION.

- a. **Lake Regulation During FY 02.** Lake regulation activities for Division lakes and Section 7 lakes during FY 02 are summarized in Section VI through IX of this report. Operational data summaries for all of the SWD projects, including Section 7, are shown in tabular form, Section X. An index, by basin, to these tables is included which also lists pertinent data for each project. Also included is a listing in alphabetical order giving names of both the lake and dam where different.
- b. **System Regulation Studies.** None done in 2002.
- c. **Water Control Manuals.** A summary entitled "Status of Water Control Manuals in SWD" is included in Section IV of this report. The summary gives the status and completion schedule through FY 03 for manuals and plans for 105 lakes and 14 river systems and subsystems. Also shown in Section IV is a schedule for completion of high priority Water Control Plans for FY 03 through FY 08. At the end of FY 02, there were 91 Corps of Engineers projects (73 lakes and 18 locks and dams) and 14 Section 7 lakes in operation in SWD. The schedule for FY 03 includes the submission of six complete water control manuals, two flood control plans (Chap.7 of the water control manuals) and one drought contingency plan for review.
- d. **Drought Contingency Plans.** A letter dated 8 June 1988 Subject; "Drought Contingency Plans (DCP)" renewed efforts within the Southwestern Division for the development of DCP's and provided additional guidance to supplement that contained in ER-1110-2-1941. This letter requested that DCP's be developed for all Corps projects with controlled reservoir storage and that the plans should only address temporary project modifications to satisfy short-term needs that can be implemented within existing authorities. During FY 88 several meetings were held in the SWD office with District personnel to develop a framework for DCP's, submittal schedules, review procedures, funding, etc. The DCP's address individual projects, however, they were developed on a river basin or sub-basin concept to include like projects. Each of the documented DCP's is an appendix to the respective river basin Master Water Control Manual. A total of 18 DCP's were required for the river basins within the SWD. A table showing the river basin and projects within each basin is included in Section IV of this report. At the end of FY 92, all 18 plans had been completed and approved. One drought contingency plan is scheduled to be updated this FY.
- e. **Section 7 Project Regulation.** Within SWD there are 14 existing Section 7 reservoirs owned and operated by other agencies. The flood control storage contained in these projects is regulated by the Corps in accordance with Section 7 of the Flood Control Act of 1944. The

Districts are continuing their efforts to bring the manuals and regulation plans into compliance with requirements contained in paragraph 208.11, Part 208 Flood Control Regulations, Chapter 11, Title 33 of the Code of Federal Regulations (41 FR 20401, May 18, 1976). Due to the varied approaches between the Districts on real time regulation for Section 7 projects, SWDO issued a policy letter on 21 March 1983. The purpose of the letter was to supersede previous SWDO guidance and to provide current policies on Section 7 projects. This letter and subsequent letters have been issued to the Districts requiring that policy on Section 7 projects are coordinated with project owners and that finalizing of water control manuals for existing projects should be expedited.

## **2. DATA COLLECTION AND MANAGEMENT.**

- a. **Stream Gaging Program.** The reporting and measurement of flow, water quality and sediment data are required for regulation, investigation and design of water resources projects. Data is obtained through a Cooperative Stream Gaging program between the Corps and the U.S. Geological Survey (USGS). During FY 02 the SWD-USGS cooperative program contained 290 surface water stations, 40 water quality stations, and 20 precipitation stations. The total cost of the SWD-USGS program was \$2.2 million. An additional 160 stations are operated by District personnel.
- b. **Cooperative Reporting Networks.** The National Weather Service (NWS) and the Corps of Engineers began their 63rd year of cooperation in establishing and operating networks of river and/or rainfall reporting stations. Reports from these networks supplement those stations maintained by the NWS and are utilized by the Corps of Engineers for flood control operations and flood forecasting. Hydrologic data, and other data necessary to the Corps Water Management functions, are transmitted via satellite and communications networks from the NWS's River Forecast Centers in Tulsa and Fort Worth to the Division and District offices. The data includes information on rainfall, river stages, floods, severe storms, and river forecasts, all developed by the NWS.

The estimated cost to SWD for responsibilities supporting 450 rainfall stations in the NWS Cooperative Reporting Network, was \$279,399.

- c. **Water Control Data System.** The "Water Control Data System Master Plan" for the Southwestern Division was approved by the Office, Chief of Engineers in April 1994, printed and distributed to the Districts in May 1994. The Master Plan is reviewed and revised annually.

### **(1) Communications.**

- (a) Data Collection Platforms (DCP's) transmit remote gaging station data over the Geostationary Orbiting Environment Satellite (GOES) system, which in turn, downloads that data to Wallops Island. Wallops uploads to DOMSATs (Domestic Satellites) and the data for each particular district is picked up by the district's DROT (Data Receive Only Terminal) and then downloaded to the local Unix systems. The Fort Worth DROT broadcasts data to a designated socket connection to the Division WCDS computer, the Tulsa DROT provides backup for Division. Little Rock District's DROT is also fully functional. Galveston District's new DROT is operational.
  - (b) National Weather Service (NWS) Automated Field Office Service (AFOS) data is provided by the Fort Worth and Tulsa National Weather Service River Forecast Center computers to the Fort Worth and Tulsa district WCDS. The Division receives the AFOS information via CEAP network socket connection from the Fort Worth and Tulsa districts' WCDS.
  - (c) Communication between the District and Division WCDS is via the CEEIS network using TELNET and FTP. Internal communication utilizes Exceed between the Sun Ultra and PC's.
- (2) **Data Acquisition and Analysis.** In September 1993, the SWD RCC began using the WCDS Unix-based computer system for applications that are necessary in the RCC's daily water control activities. The present SWD hardware includes a Sun Sparc Ultra, and a WCDS local area network. The Sun Sparc was installed in FY97; the most recent update to hardware and software in FY01.

Plans are to utilize Oracle IAW the CWMS Modernization Program and training of RCC personnel in Oracle will begin. SWD also maintains a time-series data storage system (HEC-DSS) collecting Division-wide data. The HEC-DSS at Fort Worth, Galveston, Tulsa, and Little Rock District offices are also available to the Division office.

Data is displayed on PC's, color plotters, and Laserjet printers. Graphic application programs utilize TEMPLATE software embedded in Fortran programs on the Unix systems, and Microsoft PowerPoint for Windows on PC's. Provisions are made to exchange data with other water management cooperators, i.e. the Office of the Chief of Engineers, Mississippi Valley Division (MVD), National Weather Service in Tulsa and Topeka, Southwestern Power Administration (SWPA), the Bureau of Reclamation, and a variety of state/local river authorities and agencies. Currently, SWD maintains daily Division Hydropower Generation reports and daily Division Lake Reports. This data, with several District auxiliary programs and data, is available to other users who have a need to be aware of the water control activities.



Tulsa and Fort Worth collect Stage 3 data from the National Weather Service River Forecast Centers and have developed software programs to utilize this information.

### **3. COORDINATION WITH WATER MANAGEMENT INTERESTS.**

a. **General.** The benefits derived from coordination with other personnel associated with water management activities are well recognized. For this reason, special emphasis has been placed maintaining this type of interface through teleconferences, meetings and specialty workshops. These occasions are sponsored by the district, division, HQUSACE and other Corps water management related offices.

- (1) An annual meeting of the Reservoir Control personnel within SWD is convened by the SWD RCC for the purpose of discussing timely topics and exchanging information. Personnel from Mississippi River Division, Vicksburg District, and Hydrologic Engineering Center were in attendance. This year the annual meeting was hosted by Galveston District at their district office. The meeting was convened 29-30 November 2001.
- (2) All four districts were visited at least once by selected staff of the SWD RCC (See para. 5.b.(5) of this section). These inspection visits were orchestrated to assess, observe and offer guidance or assistance to insure each district's RCC mission directives were in place and operating at full efficiency. Each visit concluded with an exit briefing given to the Chief of the section and other invited senior district personnel. Each inspection was followed-up by a set of written minutes and recommendations.

b. **Agency coordination.**

(1) **Arkansas River Basin Coordinating Committee.**

- (a) The Arkansas River Basin Coordinating Committee (ARBCC) was established as an advisory committee during development and adoption of a formal plan of regulation for the Arkansas River Basin system of flood control reservoirs. The committee met annually from 1970 through 1982. The product of these efforts was a series of annual refinements to the operating plan culminating with the 1979 plan, which was adopted. The committee was reestablished in 1986 in response to basin water user's concern over the Corps adoption of the "1986 Arkansas River Basin Operational Plan" (commonly referred to as the "fine tuning plan"). Notification of this plan, which is still current, was issued on 17 June 1986. At that time, the water users suggested that the Division Commander develop a formal operating charter for the committee. During development and coordination associated with development of the draft charter, SWD staff (Engineering Division, Resource Management and Office of Counsel) advised the

Division Commander that the ARBCC, although an operating body since 1970, was not in complete conformance with the Federal Advisory Committee Act (FACA) enacted in 1972. The FACA severely limits a Federal agency's authorities as they apply to a group such as the ARBCC. Furthermore, the only way to sanction continued Corps involvement (other than as a technical advisor) would be to seek authorization through legislation or approval by the Department of the Army in accordance with AR 15-1 procedures. However, the FACA does not apply to meetings if they are open to the public and are conducted in an informal environment for the purpose of obtaining the advice of individual attendees and not for the purpose of utilizing the group to obtain consensus advice or recommendations. In view of the above, the non-Corps leadership of the ARBCC was informally notified of these constraints and that the only role that the Corps could legally participate in was that of a technical advisor. ARBCC did convene a meeting in May 1997, however, the Corps' participation (Tulsa District) was limited to attending and acting only as a designated technical advisor.

- (2) **Cooperation with Mississippi Valley Division.** The SWD RCC continues its cooperation with MVD and provides observed, as well as forecasted data, significant to the water management activities in MVD.
- (3) **Cooperation with Southwestern Power Administration.** The SWPA is an agency of the United States, established in the Department of Energy, to execute the purposes of the Flood Control Act of 1944 with respect to the disposition of the electric power and energy made available from the reservoir projects under control of the Department of the Army in the area comprising all of Arkansas and Louisiana and portions of Missouri, Kansas, Texas, and Oklahoma. The scheduling of releases for hydropower production from the 18 Corps of Engineers projects within SWD has a significant effect on the overall water management activities in the Division. Therefore, close cooperation and continuous communication between the Corps and SWPA are mandatory. A Memorandum of Understanding was signed by the SWPA and the Corps of Engineers in 1980. SWPA and SWD have proceeded to develop a draft detail Operating Arrangement to assist in the operations of hydropower projects within SWD. SWD has formally informed the SWPA that the draft document would be its policy for coordinating operations with them until such time that both agencies have signed the arrangement. Specific activities included in the Operating Arrangement for cooperation between SWPA and RCC are monthly scheduling of power production, preparation of data for reports to the Federal Energy Regulatory Commission (FERC), and daily coordination of routine data on current conditions, inflow forecasts, and release schedules. The RCC has taken every opportunity to improve and strengthen relations with SWPA through correspondence, regularly scheduled and special meetings, providing access to our computer systems, and by special studies aimed at improving energy production and scheduling at SWD power projects.
- (4) **Cooperation with the National Weather Service.** Little Rock District is

coordinating all efforts with respect to obtaining Next Generation Radar data (NEXRAD) within SWD. LRD is receiving data from several sites.

**SECTION III**

**FACILITIES AND PERSONNEL**

## SECTION III - FACILITIES AND PERSONNEL

### 1. Facilities.

- a. **Office Space.** Water Management personnel are located on the eighth floor of the Earl Cabell Federal Building, 1100 Commerce Street, Dallas, Texas.
- b. **Display Facilities.** The display equipment located in the Engineering Division Conference Room consists of a 486 Intel-based PC operating a 37" NEC Monitor; an overhead projector; video cassette recorder; portable projection equipment; a projection screen; and multiple chalkboards. This equipment supports conferences, briefings and flood emergency/weather briefings.
- c. **Communications Equipment.** The WCDS computer system is a TCP/IP based network of an Ultra Sun Sparc workstation, , WINDOWS/NT 486 Intel-based personal computers, a WCDS local area network, a brouter, a device interface (DI), printers and various support equipment.
  - (1) **WCDS Computers.** A new Ultra Sun Sparc 60 workstation was installed and is running HEC applications. The operating system was upgraded to Solaris 8. These updates/upgrades were made to comply with hardware/software requirements for deployment of CWMS.
  - (2) **Local PC's.** Intel-based 486 computers are used to communicate not only with the local Unix systems, but also other Corps of Engineers computer systems via the CEAP wide area net, the WCDS local area network and the Information Management local area network. The PC's utilize XCEED for Windows/NT (with Microsoft Network Software) as a communication's package, acting as a 4107 interface to the graphics on the Unix systems. Local PC programs, i.e., Microsoft Windows 2000, Office 2000, Arc View, etc, are utilized on each system as well as the programs necessary to interact with IM's Microsoft Outlook Mail System.
  - (3) **Support Hardware.** A variety of printers, plotters, and general communications equipment (a brouter, a DI, and some modems) are located in the computer room. Emergency Operations provides the satellite-feed equipment for a 25" color television and VCR, used to monitor and record weather and news events on Cable News Network (CNN), The Weather Channel, C-SPAN, and local TV stations. All this equipment is additional support for the WCDS community in the Southwestern Division.

## 2. **Personnel.**

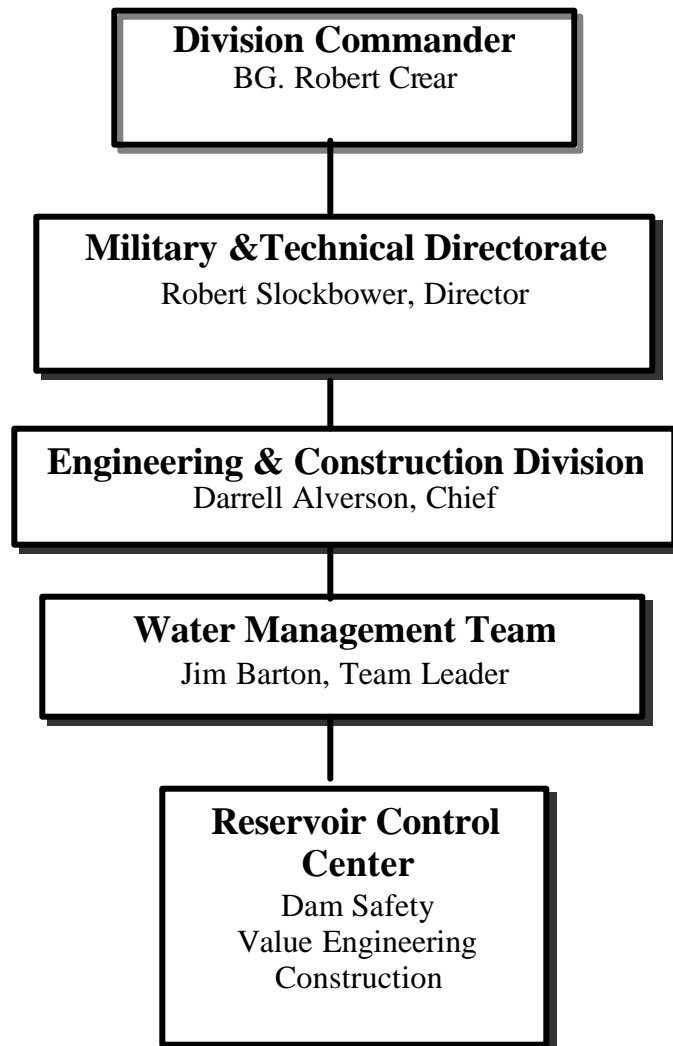
- a. **Staff.** The Reservoir Control Center is part of the Water Management Team, within the Engineering & Construction Division. The RCC has been assigned a staffing level of 3 positions. The positions consist of two GS-13 Hydraulic Engineers and one GS-12 Computer Specialist. The staffing level for RCC is described in Table 1. The Command Structure diagram shown at the end of this section describes the Chain of Command structure.

**Table 1**  
**Southwestern Division**  
**Reservoir Control Center Organization and Staff**

<b>Name</b>	<b>Position</b>
Darrell Alverson	Chief, Engineering & Construction Division
Jim Barton	Team Leader, Water Management Team
Gary Goodwin	Hydraulic Engineer
Vacant	Hydraulic Engineer
Annabeth Lee	Computer Specialist

- b. **Training.** The RCC periodically assesses the developmental needs of its personnel and schedules required training. During FY 02, RCC computer specialist attended local classes in computer training and graduate courses in GIS.

# **Southwestern Division Reservoir Control Center Command Structure**



**SECTION IV**

**STATUS OF WATER CONTROL MANUALS**

**AND**

**DROUGHT CONTINGENCY PLANS**



## SECTION IV - STATUS OF WATER CONTROL MANUALS AND DROUGHT CONTINGENCY PLANS

1. **Status Of Water Control Manuals.** Table 2 show the current status of the Southwestern Division Water Control Manuals.

**Table 2**  
**Status of Water Control Manuals in SWD**  
**(Report Control Symbol DAEN-CWE-16)**

Reservoir	Stream	Owner	Dist.	Approved		Sta. <sup>1</sup>	Scheduled Thru FY 03	
<b>White River Master</b>		CE	SWL	SEP 93	SWD	F		
Beaver	White River Basin	CE	SWL	OCT 98	SWD	F		
Table Rock	White River Basin	CE	SWL	JAN 67	OCE	F		[
Bull Shoals	White River Basin	CE	SWL	JAN 67	OCE	F		[
Norfork	White River Basin	CE	SWL	JAN 67	OCE	F		[
Clearwater	Black River	CE	SWL	JUL 95	SWD	F		
Greers Ferry	Little Red River	CE	SWL	JUN 66	OCE	F		[
[ - Due to WRDA '99 requirements and HQUSACE DYMS guidance, these manual updates are being suspended until outcome of studies and investigations are finalized and a clear direction has been established.								
<b>Arkansas Master</b>		CE	SWT	OCT 80	SWD	F		
Cheney (1)	N.F. Ninnescah	BR	SWT	MAR 97	SWD	F		
El Dorado	Walnut River	CE	SWT	JUN 01	SWD	F		
Kaw	Arkansas River	CE	SWT	FEB 95	SWD	F		
Great Salt Plains	Salt Fork Ark	CE	SWT	OCT 99	SWD	F		
Keystone	Arkansas River	CE	SWT	JAN 90	SWD	F		
Heyburn	Polecat Creek	CE	SWT	DEC 84	SWD	F		
Webbers Falls , L&D 16	Arkansas River	CE	SWT	DEC 97	SWD	F		
Tenkiller Ferry	Illinois River	CE	SWT	MAR 77	SWD	F		
R.S. Kerr , L&D 15	Arkansas River	CE	SWT	DEC 98	SWD	F		
W.D. Mayo , L&D 14	Arkansas River	CE	SWT	MAY 99	SWD	F		
Wister	Poteau River	CE	SWT	JUN 74	SWD	F		

NOTES: (1) = Section 7 Project, flood control regulation by CE.

AR = Approved, comments to be answered.

F = Complete, comments answered and approved.

FR = Published in Federal Register.

P = Plan.

R = Revision or answer to comments.

R\* = Returned without approval.

U = Update of existing approved manual.

GRDA = Grand River Dam Authority.

WCID = Wichita County Water  
Improvement District.

LCRA = Lower Colorado River  
Authority.

BR = Bureau of Reclamation

**Table 2**  
**Status of Water Control Manuals in SWD**  
**(Report Control Symbol DAEN-CWE-16)**

Reservoir	Stream	Owner	Dist.	Approved		Sta. <sup>1</sup>	Scheduled Thru FY 03	
<b>Verdigris System</b>								
Toronto	Verdigris River	CE	SWT	FEB 90	SWD	F		
Fall River	Fall River	CE	SWT	APR 93	SWD	F		
Elk City	Elk River	CE	SWT	SEP 95	SWD	F		
Pearson-Skubitz-Big Hill	Big Hill Creek	CE	SWT	APR 83	SWD	F		
Oologah	Verdigris River	CE	SWT	MAY 97	SWD	F		
Copan	Caney River	CE	SWT	MAR 83	SWD	F		
Hulah	Caney River	CE	SWT	MAR 99	SWD	F		
Birch	Bird Creek	CE	SWT	SEP 81	SWD	F		
Skiatook	Hominy Creek	CE	SWT	APR 88	SWD	F		
Newt Graham , L&D 18	Verdigris River	CE	SWT	AUG 72	SWD	F	JUL 03	P
Chouteau , L&D 17	Verdigris River	CE	SWT	AUG 72	SWD	F		
<b>Grand System</b>								
Council Grove	Neosho River	CE	SWT	MAR 95	SWD	F		
Marion	Cottonwood River	CE	SWT	APR 96	SWD	F		
John Redmond	Neosho River	CE	SWT	APR 96	SWD	F		
Pensacola (1)	Neosho River	GRDA	SWT	NOV 92	SWD	F		
Markham Ferry (1)	Neosho River	GRDA	SWT	NOV 92	SWD	F		
Fort Gibson	Neosho River	CE	SWT	NOV 92	SWD	F		
<b>Canadian System</b>								
Sanford (1)	Canadian River	BR	SWT	FEB 66	OCE	AR	SEP 03	P
Norman (1)	Little River	BR	SWT	OCT 93	SWD	F		
Optima	N. Canadian River	CE	SWT	JAN 72	SWD	F		
Fort Supply	Wolf Creek	CE	SWT	JAN 72	SWD	F	AUG 03	U
Canton	N. Canadian River	CE	SWT	DEC 93	SWD	F		
Arcadia	Deep Fork River	CE	SWT	JUN 86	SWD	F		
Eufaula	Canadian River	CE	SWT	JAN 94	SWD	F		

**Table 2**  
**Status of Water Control Manuals in SWD**  
**(Report Control Symbol DAEN-CWE-16)**

Reservoir	Stream	Owner	Dist.	Approved		Sta. <sup>1</sup>	Scheduled Thru FY 03	
<b>Arkansas Master</b>		CE	SWL	SEP 80	SWD	F		
Lock & Dam 13	Arkansas River	CE	SWL	SEP 91	SWD	F		
Ozark-Jetta Taylor	Arkansas River	CE	SWL	SEP 74	SWD	F		
Dardanelle	Arkansas River	CE	SWL	APR 76	SWD	F	SEP 03	U
Blue Mountain	Petit Jean	CE	SWL	OCT01	SWD	F		
Lock & Dam 9	Arkansas River	CE	SWL	SEP 98	SWD	F		
Lock & Dam 8 Toad Suck Ferry	Arkansas River	CE	SWL	AUG 74	SWD	F		
Nimrod	Fourche La Fave	CE	SWL	AUG 02	SWD	F		
Lock & Dam 7 Murray	Arkansas River	CE	SWL	MAY 97	SWD	F		
Lock & Dam 6 David D. Terry	Arkansas River	CE	SWL	SEP 74	SWD	F	SEP 03	U
Lock & Dam 5	Arkansas River	CE	SWL	SEP 74	SWD	F		
Lock & Dam 4	Arkansas River	CE	SWL	SEP 74	SWD	F		
Lock & Dam 3	Arkansas River	CE	SWL	SEP 74	SWD	F		
Lock & Dam 2	Arkansas River	CE	SWL	DEC 98	SWD	F		
Lock & Dam 1 (Ark Post Canal)	Arkansas River	CE	SWL	SEP 74	SWD	F		
Montgomery Point L&D	White River	CE	SWL	N/A	N/A	N/A		
<b>Red River Master</b>		CE	SWT	FEB 63	OCE	AR		
Altus (1)	N. Fork River	BR	SWT	MAR 93	SWD	F		
Mountain Park (1)	Otter Creek	BR	SWT	OCT 93	SWD	F		
Truscott Brine Lake	Bluff Creek	CE	SWT	DEC 95	SWD	F		
Lake Kemp (1)	Wichita River	WCID	SWT	MAY 94	SWD	F		
Waurika	Beaver Creek	CE	SWT	APR 77	SWD	F		
Foss (1)	Washita River	BR	SWT	SEP 93	SWD	F		
Fort Cobb (1)	Cobb Creek	BR	SWT	JUL 98	SWD	F		
Arbuckle (1)	Rock Creek	BR	SWT	NOV 66	OCE	AR	AUG 03	U
Texoma	Red River	CE	SWT	JUL 93	SWD	AR		
Pat Mayse	Sanders Creek	CE	SWT	OCT 67	OCE	F		
Sardis	Jackfork Creek	CE	SWT	AUG 84	SWD	F		
McGee Creek (1)	Muddy Boggy Creek	BR	SWT	OCT 89	SWD	F		
Hugo	Kiamichi River	CE	SWT	MAY 82	SWD	AR		

**Table 2**  
**Status of Water Control Manuals in SWD**  
**(Report Control Symbol DAEN-CWE-16)**

Reservoir	Stream	Owner	Dist.	Approved		Sta. <sup>1</sup>	Scheduled Thru FY 03	
Little River System								
Pine Creek	Little River	CE	SWT	OCT 98	SWD	F		
Broken Bow	Mountain Fork	CE	SWT	NOV 74	SWD	F		
Dequeen	Rolling Fork	CE	SWL	JUN 76	SWD	R		
Gillham	Cossatot River	CE	SWL	JUL 86	SWD	F		
Dierks	Saline River	CE	SWL	APR 76	SWD	F		
Millwood	Little River	CE	SWL	NOV 73	SWD	F		
Sulphur River Master								
Cooper	Sulphur River	CE	SWF					
Wright Patman	Sulphur River	CE	SWF	SEP 74	LMVD	F		
Lake O' The Pines	Cypress Creek	CE	SWF	NOV 74	LMVD	F		
Neches River Master		CE	SWF	MAR 63	OCE	AR		
B. A. Steinhagen	Neches River	CE	SWF	FEB 63	OCE	AR		
Sam Rayburn	Angelina River	CE	SWF	FEB 73	SWD	AR		
Trinity River Master		CE	SWF					
Benbrook	Clear Fork	CE	SWF	SEP 01	SWD	F		
Joe Pool	Mountain Creek	CE	SWF	SEP 01	SWD	F		
Ray Roberts	Elm Fork	CE	SWF	DEC 97	SWD	F		
Lewisville	Elm Fork	CE	SWF	MAY 97	SWD	F		
Grapevine	Denton Creek	CE	SWF	AUG 96	SWD	F		
Lavon	East Fork	CE	SWF	MAY 75	SWD	P	SEP 03	U
Navarro Mills	Richland Creek	CE	SWF	JUL 64	OCE	AR		
Bardwell	Waxahacie Creek	CE	SWF	MAR 89	SWD	F		
Wallisville	Trinity River	CE	SWG					
Buffalo Bayou Master		CE	SWG					
Barker	Buffalo Bayou	CE	SWG	OCT 78	SWD	F		
Addicks	Buffalo Bayou	CE	SWG	OCT 78	SWD	F		

**Table 2**  
**Status of Water Control Manuals in SWD**  
**(Report Control Symbol DAEN-CWE-16)**

<b>Reservoir</b>	<b>Stream</b>	<b>Owner</b>	<b>Dist.</b>	<b>Approved</b>		<b>Sta. <sup>1</sup></b>	<b>Scheduled Thru FY 03</b>	
<b>Brazos River Master</b>		CE	SWF	MAR 73	SWD	R*		
Whitney	Brazos River	CE	SWF	MAY 75	SWD	F		
Aquilla	Aquilla Creek	CE	SWF	JUL 88	SWD	F		
Waco	Bosque River	CE	SWF	JUN 75	SWD	F		
Proctor	Leon River	CE	SWF	APR 74	SWD	F		
Belton	Leon River	CE	SWF	MAY 76	SWD	F		
Stillhouse Hollow	Lampasas River	CE	SWF	FEB 79	SWD	F		
Georgetown	N.F. San Gabriel	CE	SWF	JUN 90	SWD	F		
Granger	San Gabriel	CE	SWF	MAR 91	SWD	F		
Somerville	Yegua Creek	CE	SWF	NOV 73	SWD	F		
<b>Colorado River Master</b>		CE	SWF					
Hords Creek	Hords Creek	CE	SWF	MAY 62	OCE	AR		
O.C. Fisher	N. Concho	CE	SWF	DEC 62	OCE	AR		
Twin Buttes (1)	S. Concho	BR	SWF	SEP 66	OCE	P/FR		
Marshall Ford (1)	Colorado River	BR	SWF	AUG 99	SWD	P/FR		
<b>Guadalupe River Master</b>		CE	SWF	JAN 66	OCE	AR		
Canyon	Guadalupe River	CE	SWF	OCT 78	SWD	F		

2. **Schedule of High Priority Water Control Plans.** Table 3 shows the schedule of the Southwestern Division High Priority Water Control Plans from FY03 through FY08.

**Table 3**  
**Southwestern Division**  
**Schedule of High Priority Water Control Plans**  
**FY 03 Thru FY 08**

<b>FY</b>	<b>Fort Worth</b>	<b>Galveston</b>	<b>Little Rock</b>	<b>Tulsa</b>
03	Lavon		Dardanelle	Arbuckle (Final)
			D.D. Terry L&D 6	Fort Supply
				Newt Graham L&D (Plan)
				Sanford (Plan)
04	Cooper		L&D 5	Birch(Plan)
	Sam Rayburn(Plan)		Emmett Sanders L&D 4	Chouteau L&D
	Town Bluff(Plan)		Joe Hardin L&D 3	Heyburn (Plan)
				Optima(Plan)
				Waurika (Plan)
				Wister (Plan)
				U. Neo. R. (Drought Plan)
				U. Red R. (Drought Plan)
05	Navarro Mills		Ozark-Jetta Taylor L&D 12	Arcadia (Plan)
			Toad Suck Ferry L&D 8	Big Hill (Plan)
			Montgomery Point L&D	Copan (Plan)
				Hugo (Plan)
				Pat Mayse (Plan)
				Tenkiller (Plan)
				L. Ark. R. (Drought Plan)
				Mid-Ark. R. (Drought Plan)
06	Bardwell	Addicks	Table Rock	Keystone (Plan)
		Barker	Bull Shoals	McGee Creek (Plan)
			Norfork	Sardis (Plan)
			Greer's Ferry	Skiatook (Plan)
				Toronto (Plan)
				Canadian R.(Drought Plan)
				L. Red R. (Drought Plan)
				Upper Verd (Drought Plan)
07	Sam Rayburn		Millwood	Altus (Plan)
	Town Bluff		Dierks	Canton (Plan)
			DeQueen	Fall River (Plan)
				Hudson (Plan)

**Table 3**  
**Southwestern Division**  
**Schedule of High Priority Water Control Plans**  
**FY 03 Thru FY 08**

<b>FY</b>	<b>Fort Worth</b>	<b>Galveston</b>	<b>Little Rock</b>	<b>Tulsa</b>
				Pensacola (Plan)
				Texoma (Plan)
				Norman (Plan)
				Mountain Park (Plan)
08	Wright Patman		Gillham	Council Grove (Plan)
			Norrell L&D 1	Elk City (Plan)
				Eufaula (Plan)
				Foss (Plan)
				Fort Gibson (Plan)
				Kaw (Plan)
				Kemp (Plan)

3. **Drought Contingency Plans.** Table 4 shows the Southwestern Division drought contingency plans.

**Table 4**  
**Drought Contingency Plans In SWD**

<b>Basin/Project</b>	<b>Stream</b>	<b>Dist.</b>	<b>Completion</b>	<b>Status</b>
<b>White River Basin</b>		SWL	August 1990	Approved Plan/SEP 89
Beaver	White River	SWL		
Table Rock	White River	SWL		
Bull Shoals	White River	SWL		
Norfork	White River	SWL		
Clearwater	Black River	SWL		
Greer's Ferry	Little Red River	SWL		

**Table 4**  
**Drought Contingency Plans In SWD**

<b>Basin/Project</b>	<b>Stream</b>	<b>Dist.</b>	<b>Completion</b>	<b>Status</b>
<b>Mid-Arkansas River Basin</b>		SWT	December 1990	Approved Plan/JUN 91
El Dorado	Walnut River	SWT		
Kaw	Arkansas River	SWT		
Great Salt Plains	Salt Fork ARK	SWT		
Keystone	Arkansas River	SWT		
Heyburn	Polecat Creek	SWT		
<b>Upper Verdigris River Basin</b>		SWT	July 1990	Approved Plan/AUG 90
Toronto	Verdigris River	SWT		
Fall River	Fall River	SWT		
Elk City	Elk River	SWT		
Pearson-Skubitz-Big Hill	Big Hill Creek	SWT		
<b>Lower Verdigris River Basin</b>		SWT	March 1990	Approved Plan/AUG 90
Copan	Caney River	SWT		Revision Approved NOV 02
Hulah	Caney River	SWT		
Birch	Bird Creek	SWT		
Skiatook	Hominy Creek	SWT		
Oologah	Verdigris River	SWT		
<b>Upper Neosho River Basin</b>		SWT	August 1989	Approved Plan/OCT 90
Council Grove	Neosho River	SWT		
Marion	Cottonwood River	SWT		
John Redmond	Neosho River	SWT		
<b>Lower Ark River Basin, SWT</b>		SWT	August 1989	Approved Plan/AUG 90
Fort Gibson	Neosho River	SWT		
Tenkiller Ferry	Illinois River	SWT		
Wister	Poteau River	SWT		
<b>Canadian River Basin</b>		SWT	July 1990	Approved Plan/MAY 91
Optima	N. Canadian River	SWT		
Fort Supply	Wolf Creek	SWT		
Canton	N. Canadian River	SWT		
Arcadia	Deep Fork River	SWT		
Eufaula	Canadian River	SWT		



**Table 4**  
**Drought Contingency Plans In SWD**

Basin/Project	Stream	Dist.	Completion	Status
<b>Navigation Projects, SWT</b>		SWT	December 1990	Approved Plan/SEP 92
Newt Graham, L&D 18	Arkansas River	SWT		
Chouteau, L&D 17	Arkansas River	SWT		
Webbers Falls, L&D 16	Arkansas River	SWT		
R.S. Kerr, L&D 15	Arkansas River	SWT		
W.D. Mayo, L&D 14	Arkansas River	SWT		
<b>Lower Arkansas R. Basin, SWL</b>		SWL	MARCH 1990	Approved Plan/SEP 92
Blue Mountain	Petit Jean	SWL		
Nimrod	Foruche La Fave	SWL		
Ozark-Jetta Taylor	Arkansas River	SWL		
Dardanelle	Arkansas River	SWL		
Navigation L&D'S(10)	Arkansas River	SWL		
<b>Upper Red River Basin</b>		SWT	March 1990	Approved Plan/AUG 89
Texoma	Red River	SWT		
Waurika	Beaver Creek	SWT		
<b>Lower Red River Basin,SWT</b>		SWT	July 1990	Approved Plan/JAN 90
Pat Mayse	Sanders Creek	SWT		
Sardis	Jackfork Creek	SWT		
Hugo	Kiamichi River	SWT		
Pine Creek	Little River	SWT		
Broken Bow	Mountain Fork	SWT		
<b>Little River Basin</b>		SWL	November 1990	Approved Plan/OCT 91
DeQueen	Rolling Fork	SWL		
Gillham	Cossatot River	SWL		
Dierks	Saline River	SWL		
Millwood	Little River	SWL		
<b>Lower Red River Basin, SWF</b>		SWF	August 1990	Approved Plan/OCT 91
Cooper	Sulphur River	SWF		
Wright Patman	Sulphur River	SWF		
Lake O' The Pines	Cypress Creek	SWF		

**Table 4**  
**Drought Contingency Plans In SWD**

Basin/Project	Stream	Dist.	Completion	Status
<b>Neches River Basin</b>		SWF	February 1991	Approved Plan/AUG 91
B. A. Steinhagen	Neches River	SWF		
Sam Rayburn	Angelina River	SWF		
<b>Trinity River Basin</b>		SWF	August 1989	Approved Plan/AUG 91
Benbrook	Clear Fork	SWF		
Joe Pool	Mountain Creek	SWF		
Ray Roberts	Elm Fork	SWF		
Lewisville	Elm Fork	SWF		
Grapevine	Denton Creek	SWF		
Lavon	East Fork	SWF		
Navarro Mills	Richland Creek	SWF		
Bardwell	Waxahacie Creek	SWF		
<b>Brazos River Basin</b>		SWF	May 1990	Approved Plan/AUG 91
Whitney	Brazos River	SWF		
Aquilla	Aquilla River	SWF		
Proctor	Leon River	SWF		
Belton	Leon River	SWF		
Stillhouse Hollow	Lampasas River	SWF		
Georgetown	N.F. San Gabriel	SWF		
Granger	San Gabriel	SWF		
Waco	Bosque River	SWF		
Somerville	Yequa Creek	SWF		
<b>Colorado River Basin</b>		SWF	November 1990	Approved Plan/AUG 91
Hords Creek	Hords Creek	SWF		
O.C. Fisher	North Concho	SWF		
<b>Guadalupe River Basin</b>		SWF	May 1991	Approved Plan/AUG 91
Canyon	Guadalupe River	SWF		

**SECTION V**

**REGULATION OF MULTI-PURPOSE PROJECTS**

**WITH HYDROPOWER**

## SECTION V - HYDROPOWER GENERATION- SOUTHWESTERN DIVISION PROJECTS

1. **Federal Hydropower at SWD Projects.** The 18 Federal Hydropower Projects are listed in Table 5.

**TABLE 5**

### Southwestern Division Federal Hydropower Projects

Projects	Basin	Stream	No. Units	Total Capacity MW	Page No.
Beaver Lake	White	White	2	112	V- 3
Table Rock Lake	White	White	4	200	V- 3
Bull Shoals Lake	White	White	8	340	V- 4
Norfork Lake	White	North Fork	2	70	V- 4
Greers Ferry	White	Little Red	2	96	V- 5
Keystone Lake	Arkansas	Arkansas	2	70	V- 5
Ft. Gibson Lake	Arkansas	Grand	4	45	V- 6
Webbers Falls	Arkansas	Arkansas	3	60	V-6
Tenkiller Ferry Lake	Arkansas	Illinois	2	34	V- 7
Eufaula Lake	Arkansas	S. Canadian	3	90	V- 7
Robert S. Kerr	Arkansas	Arkansas	4	110	V- 8
Ozark-Jetta Taylor	Arkansas	Arkansas	5	100	V- 8
Dardanelle	Arkansas	Arkansas	4	124	V- 9
Denison Dam	Red	Red	2	70	V- 9
Broken Bow Lake	Red	Mountain Fork	2	100	V- 10
Lake Sam Rayburn	Neches	Angelina	2	52	V- 10
Town Bluff	Neches	Neches	2	7	V- 11
Whitney Lake	Brazos	Brazos	2	30	V- 11

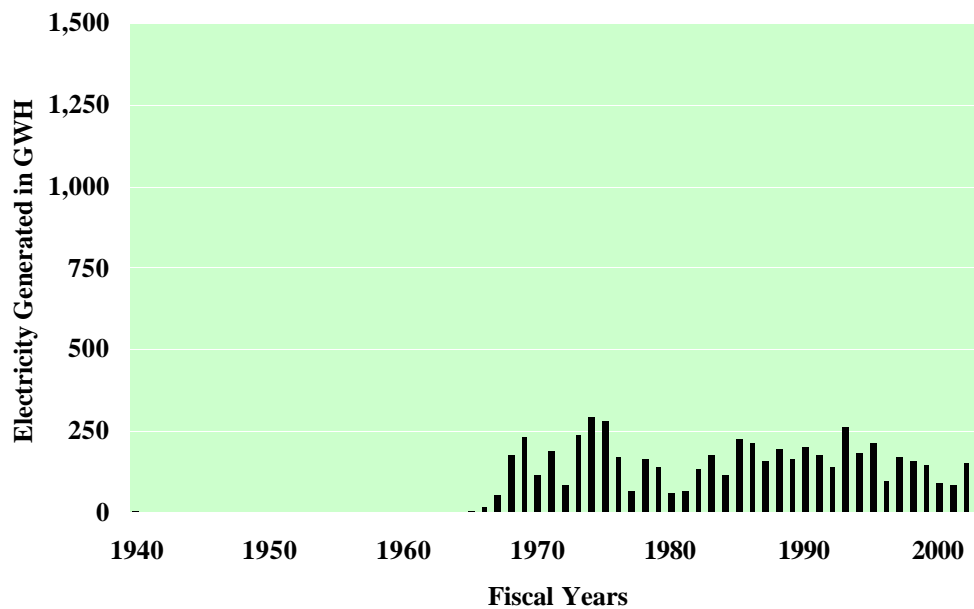
2. **Electricity Generated By Project.** Electricity generated by project for the last five fiscal years (rounded to the nearest GWH) are shown in Table 6.

**TABLE 6**  
**Southwestern Division**  
**Electricity Generated By Project**  
**in (GWH) for**  
**Fiscal Years 1998 to 2002**

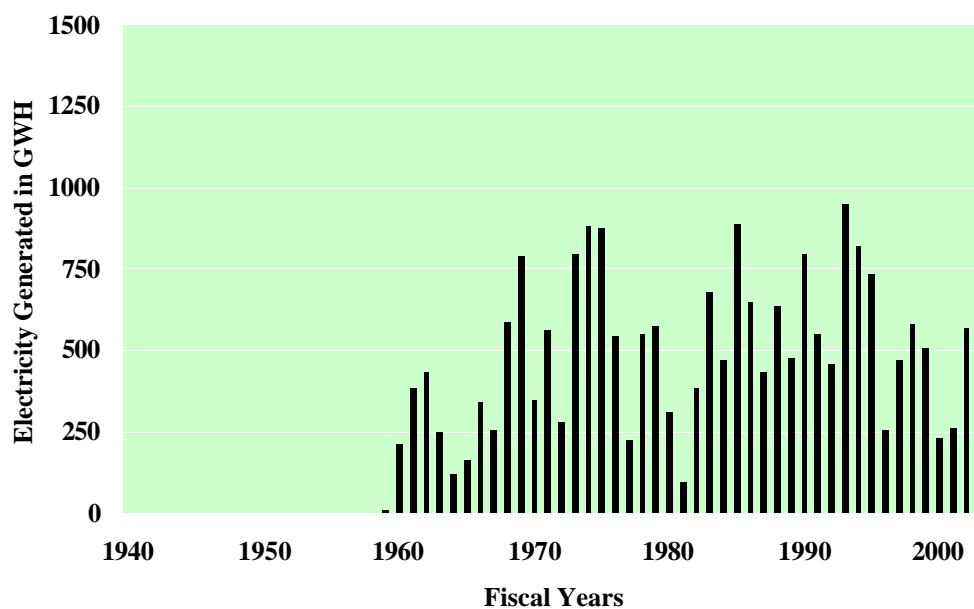
<b>Projects</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Beaver Lake	158.9	147.4	90.3	84.9	149.1
Table Rock Lake	580.6	506.8	232.3	259.5	565.8
Bull Shoals Lake	846.9	687.8	301.5	310.9	866.3
Norfork Lake	182.8	149.4	66.5	78.1	254.4
Greers Ferry Lake	156.3	112.1	80.5	89.3	199.0
Keystone Lake	248.3	495.3	324.0	252.4	167.2
Ft. Gibson Lake	251.1	334.7	171.9	149.9	172.3
Webbers Falls	232.5	282.8	228.3	207.5	186.5
Tenkiller Ferry Lake	137.0	159.6	96.0	107.5	121.9
Eufaula Lake	346.2	416.8	216.9	342.8	202.2
Robert S. Kerr	635.9	857.1	570.1	533.6	487.5
Ozark-Jetta Taylor	330.5	214.1	277.2	221.5	177.9
Dardanelle	499.7	364.7	480.3	604.3	625.0
Denison Dam	247.9	181.0	118.0	377.8	193.1
Broken Bow Lake	160.8	204.7	92.6	171.9	201.0
Lake Sam Rayburn	160.0	170.5	55.4	165.0	146.9
Town Bluff	39.1	35.4	36.3	29.3	32.6
Whitney Lake	48.8	13.0	8.3	37.3	30.0

3. **Hydropower Generation From Impoundment.** Generation by the projects, since impoundment, is depicted by figures 2 through 10 on pages V-3 to V-11.

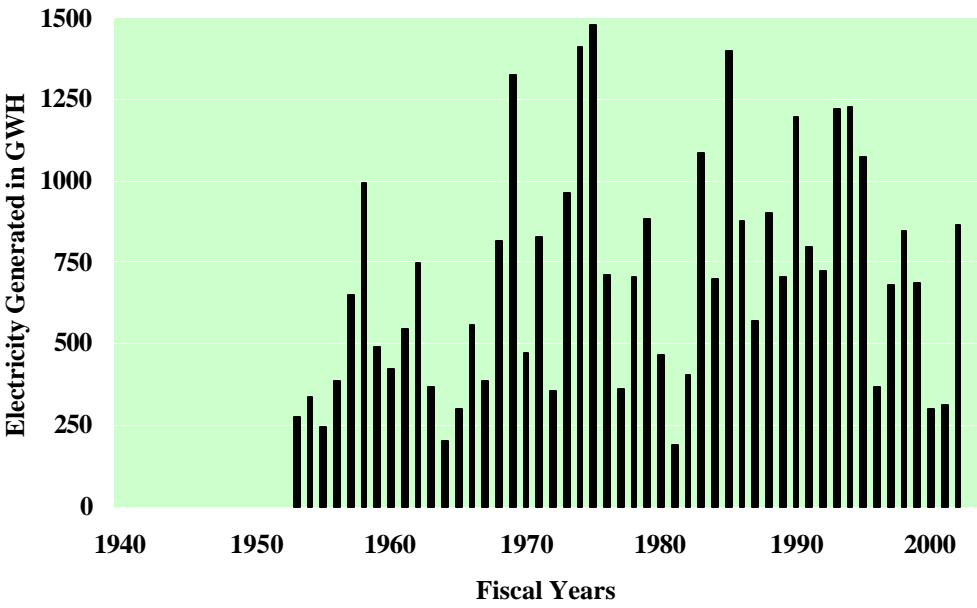
# Beaver Lake



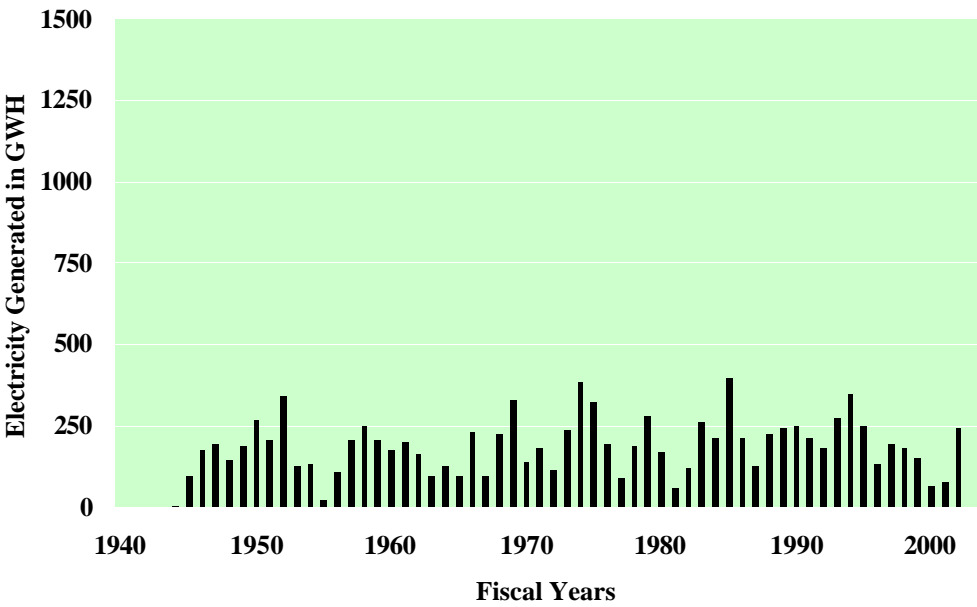
# Table Rock Lake



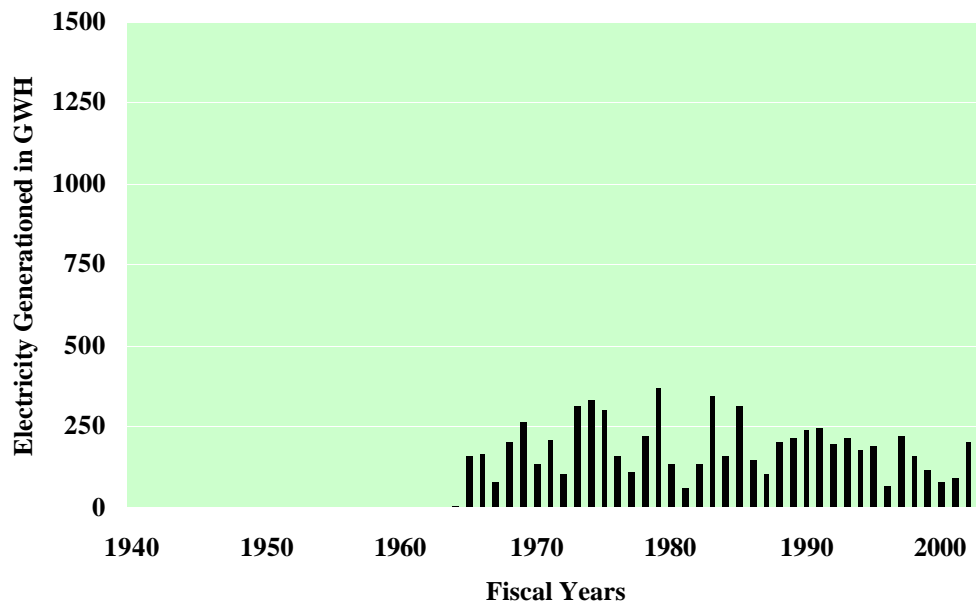
# Bull Shoals Lake



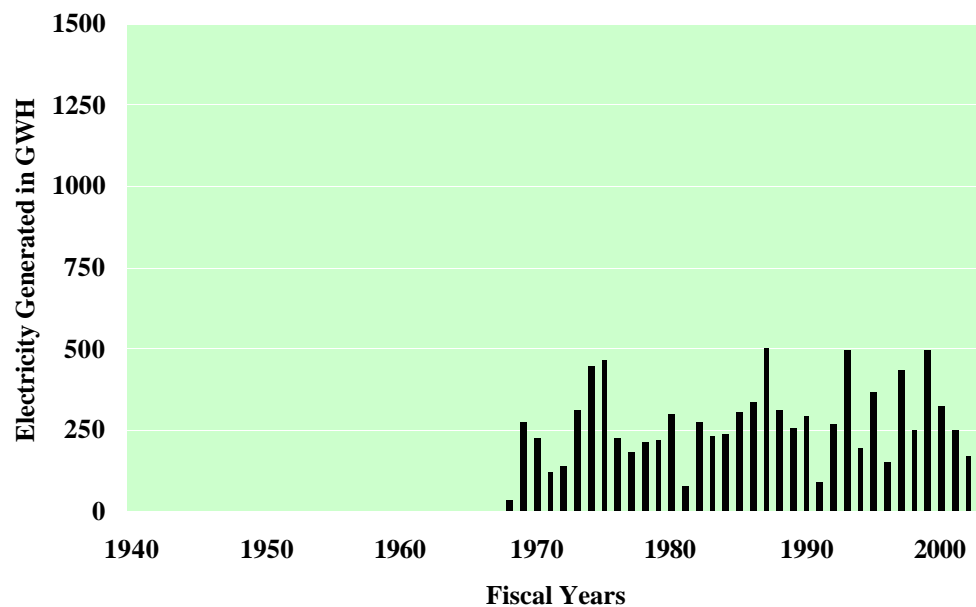
# Norfolk Lake



# Greers Ferry Lake

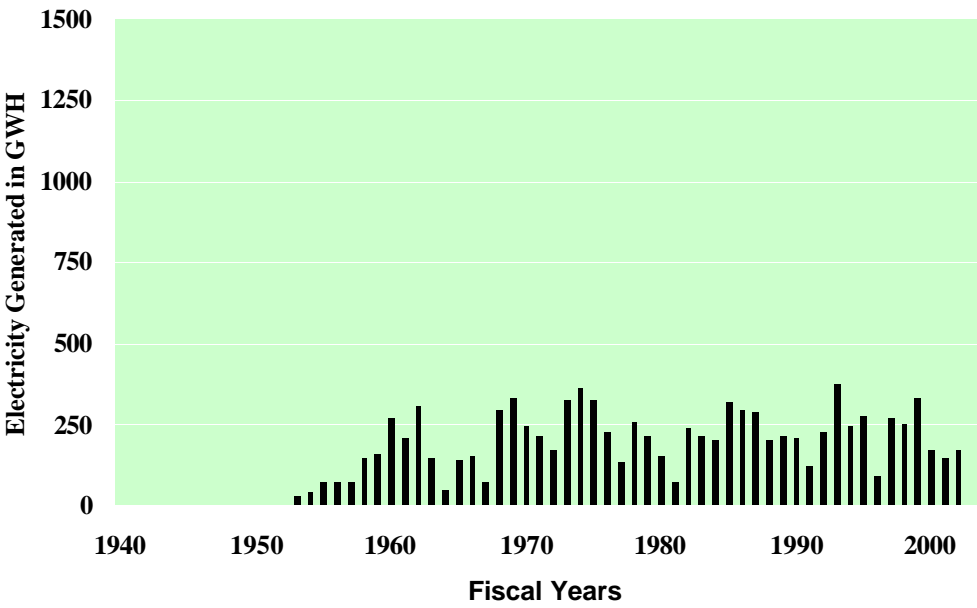


# Keystone Lake

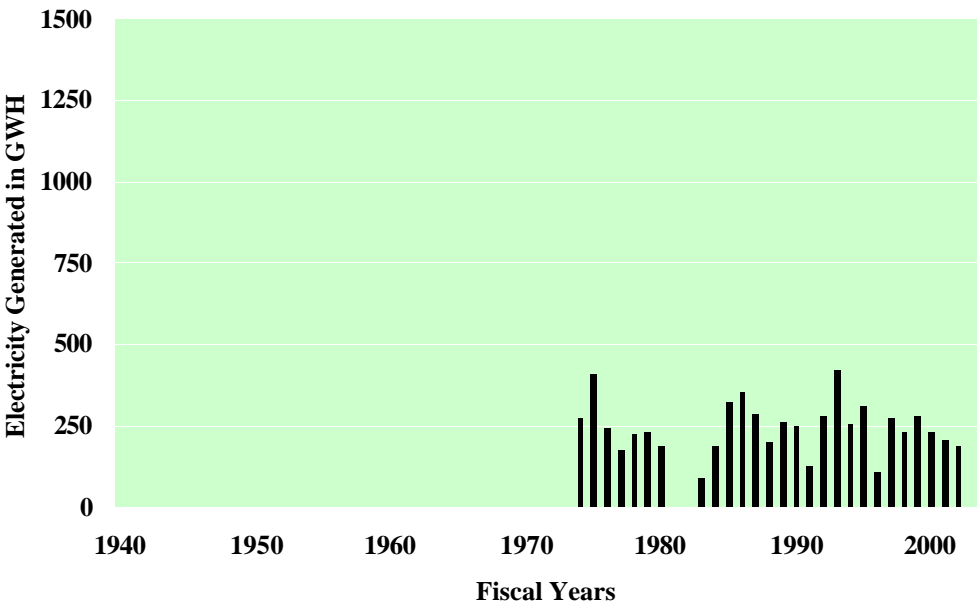




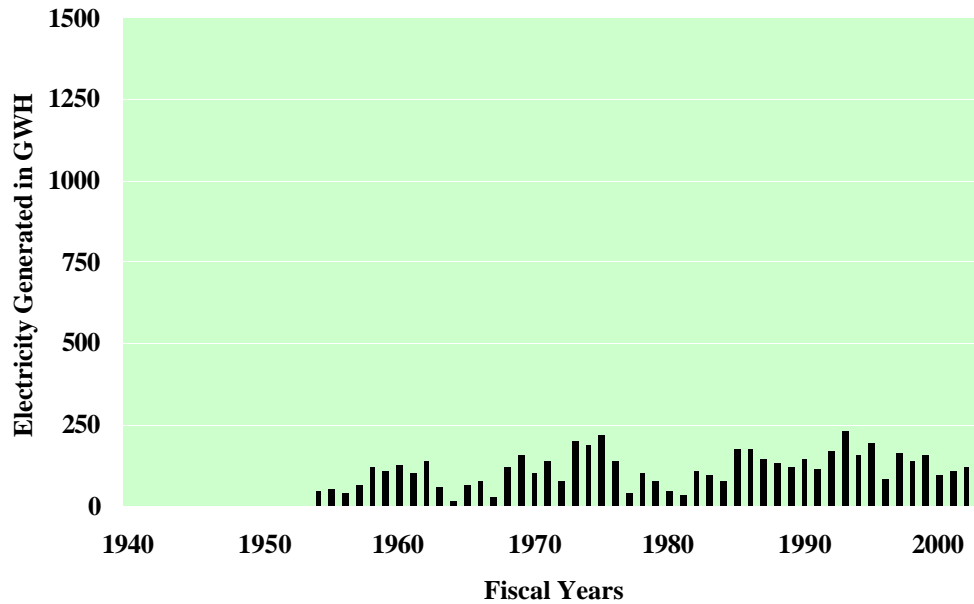
# Fort Gibson Lake



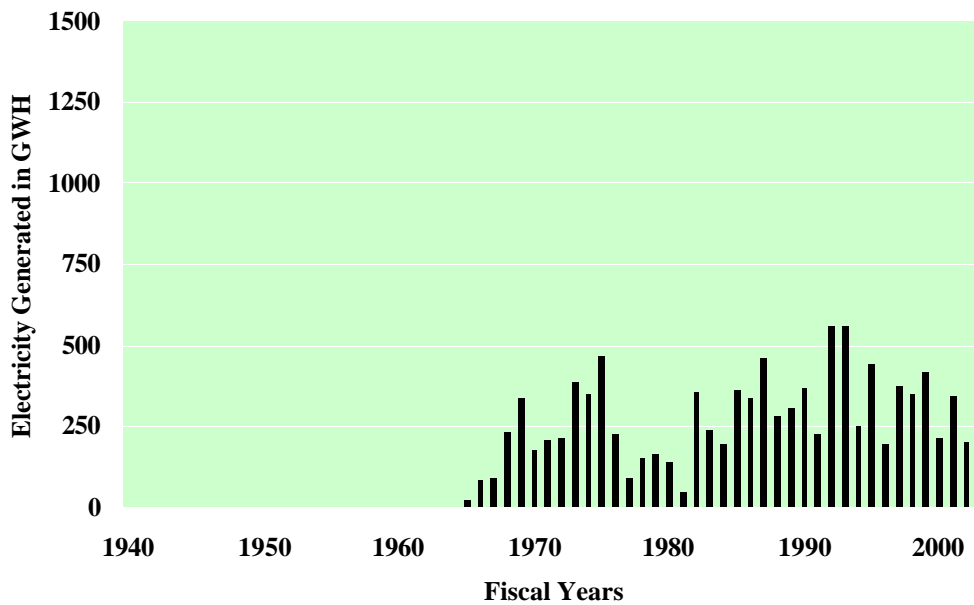
# Webbers Falls



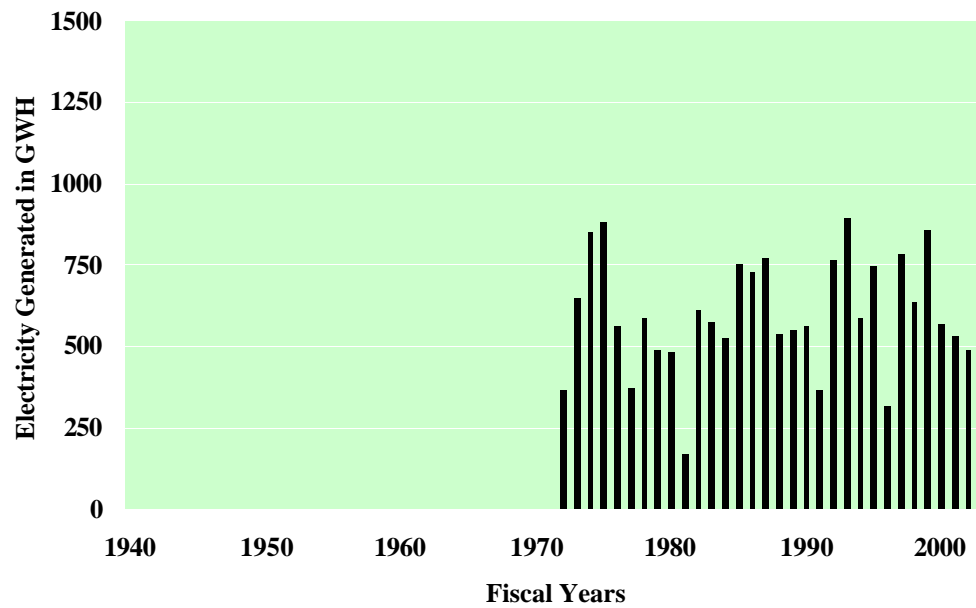
# Tenkiller Ferry Lake



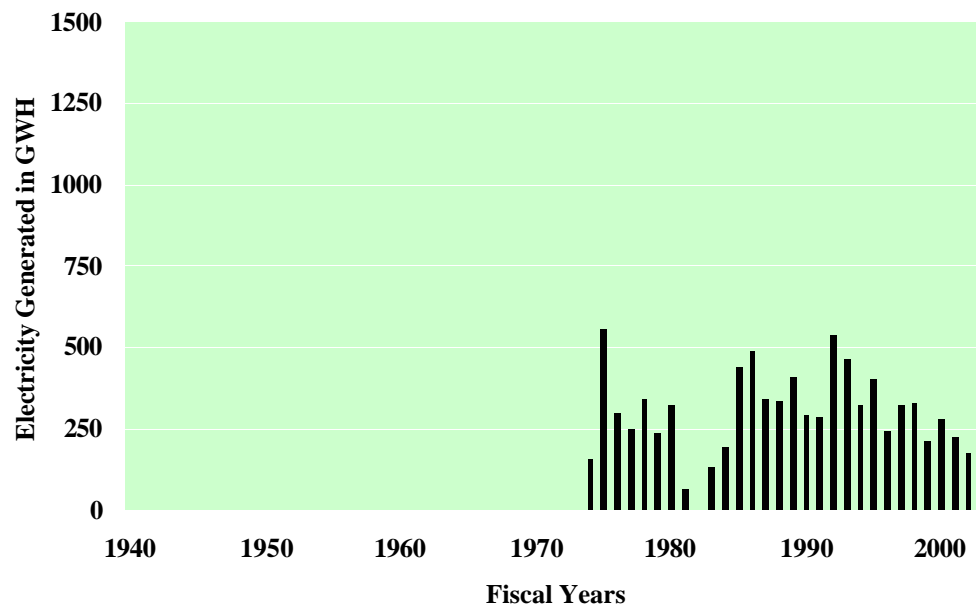
# Eufaula Lake



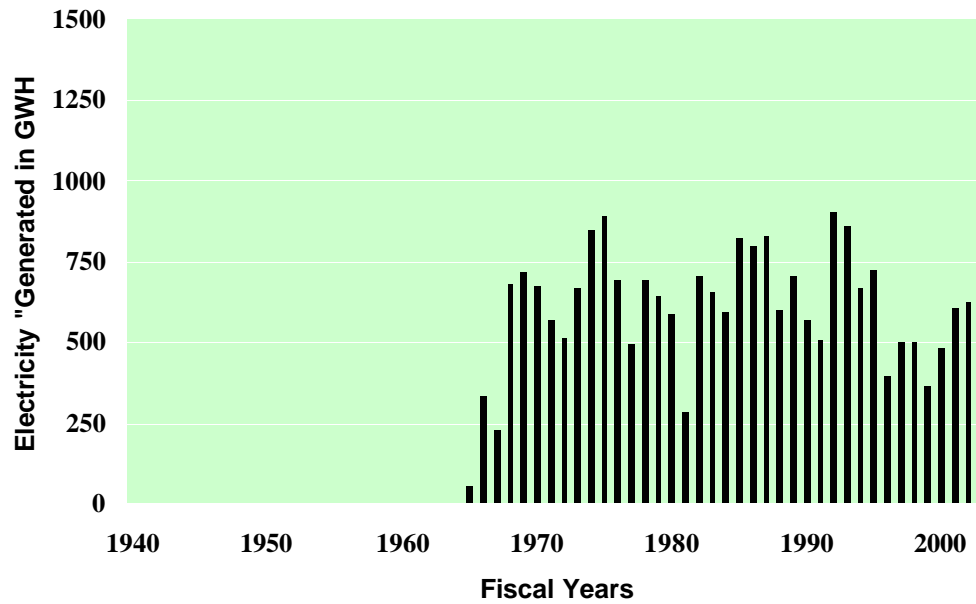
# Robert S. Kerr



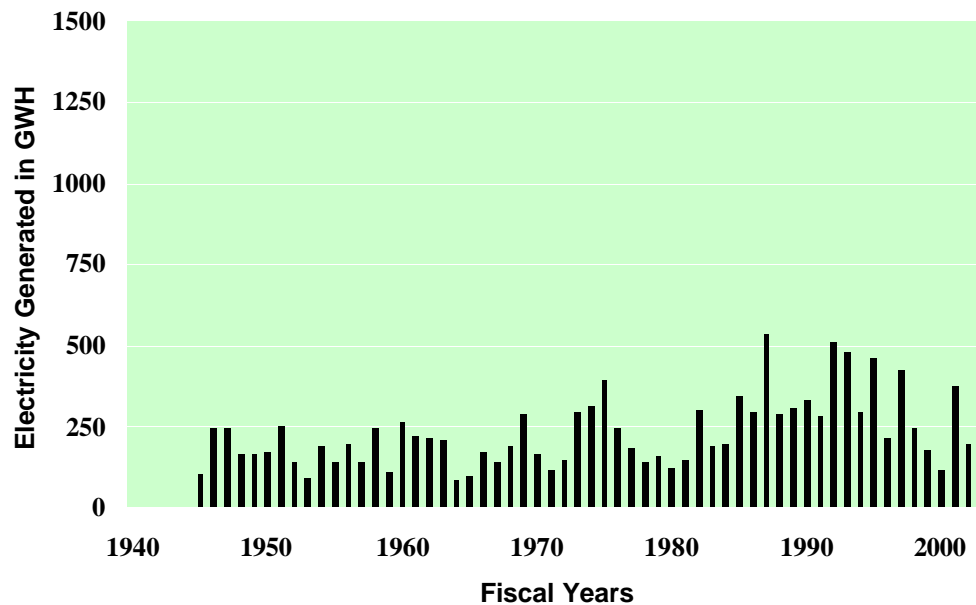
# Ozark-Jetta Taylor



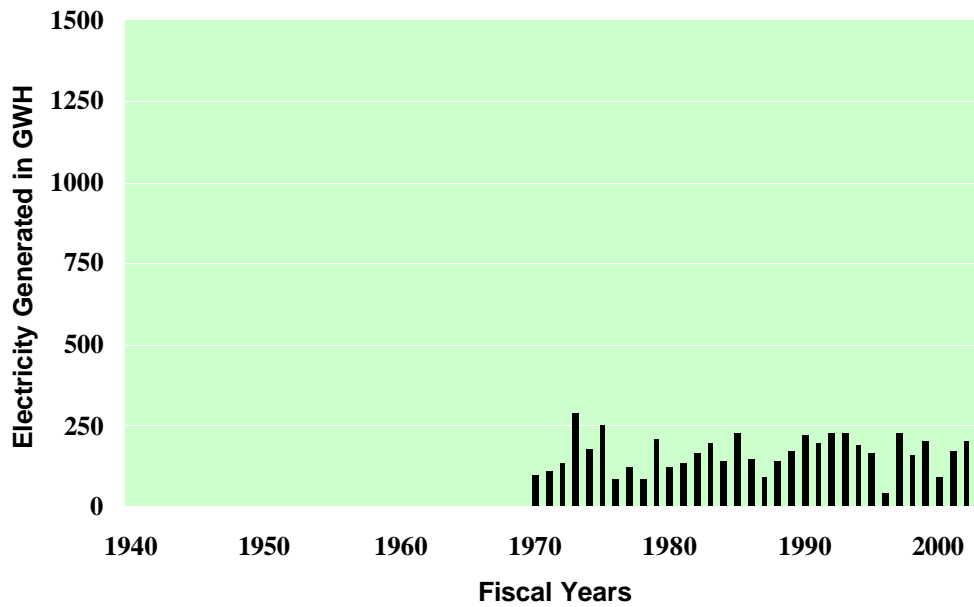
# Dardanelle



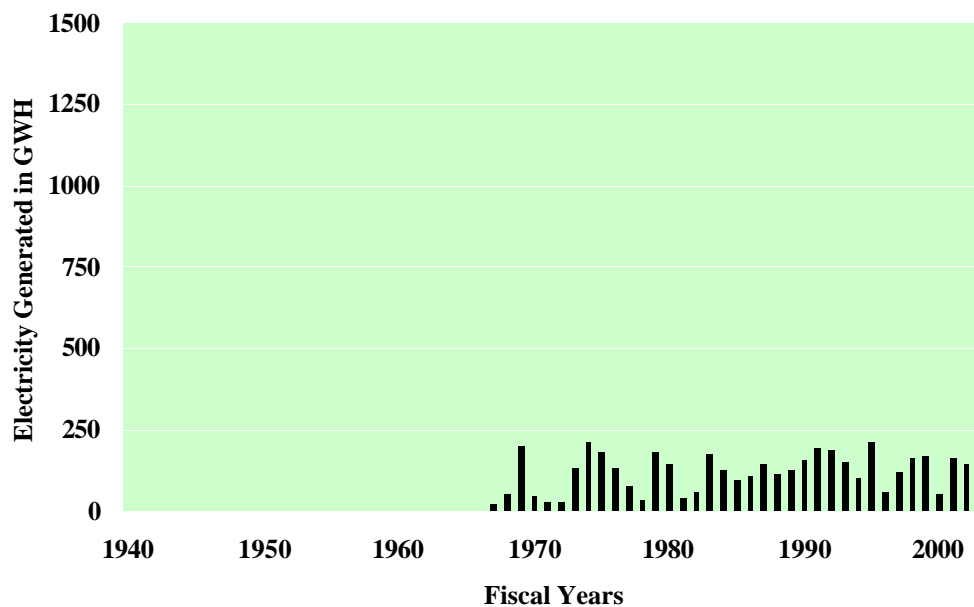
# Denison Dam



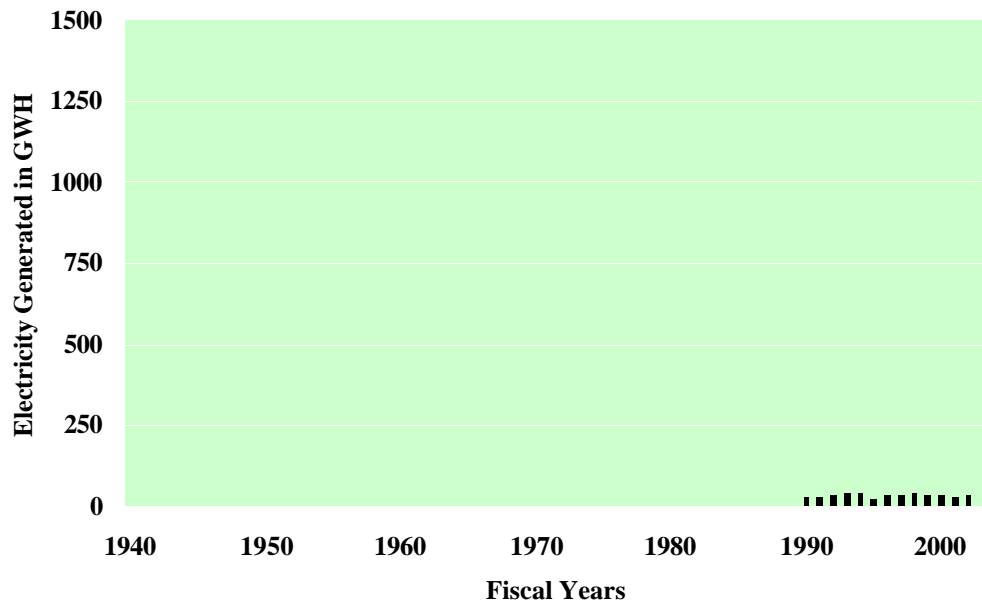
# Broken Bow Lake



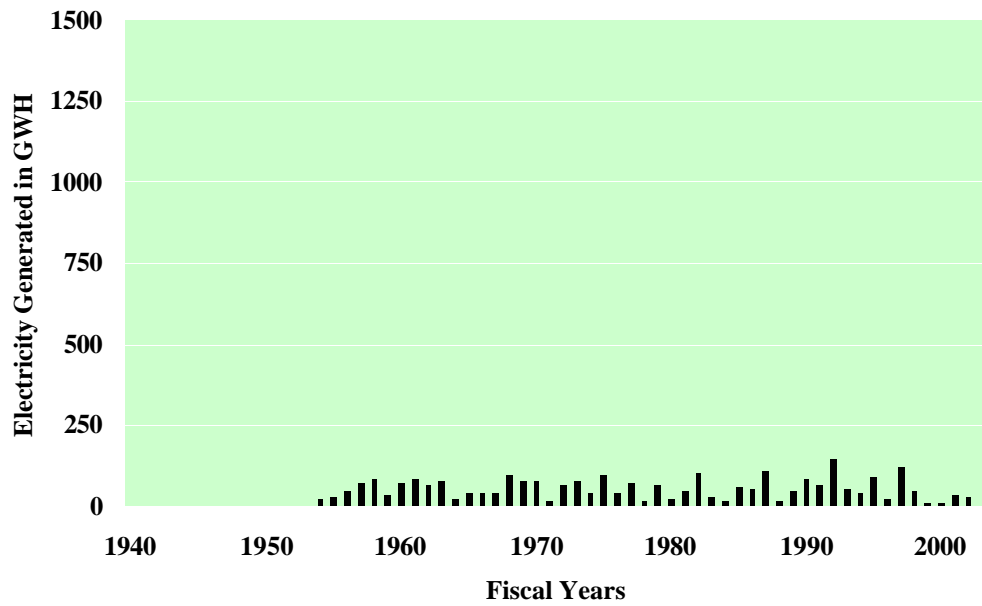
# Lake Sam Rayburn



# Town Bluff



# Whitney Lake



**SECTION VI**  
**FORT WORTH DISTRICT**  
**WATER CONTROL ACTIVITIES**

## SECTION VI – FORT WORTH DISTRICT WATER CONTROL ACTIVITIES

### 1. ANNUAL FLOOD DAMAGES PREVENTED PER RIVER BASIN.

Annual flood damages prevented by river basin and project for both Corps' and Section 7 lakes are shown in the following table. Table 7 presents the damages prevented for both FY 2002 and the cumulative through FY 2002.

**Table 7**  
**Fort Worth District**  
**Annual Flood Damages Prevented Through FY 2002**  
**Current Dollars**  
**(Not Adjusted For Inflation)**

PROJECT	FY 2002 DAMAGES PREVENTED	CUMULATIVE BENEFITS THROUGH FY 2002
<b>Brazos River Basin</b>		
Aquilla	\$ 450,000	\$ 20,816,500
Belton	\$ 3,897,900	\$ 148,603,400
Georgetown	\$ 81,200	\$ 5,592,100
Granger	\$ 902,900	\$ 33,027,600
Proctor	\$ 11,000	\$ 38,960,700
Somerville	\$ 0	\$ 66,013,400
Stillhouse	\$ 2,148,300	\$ 39,104,700
Waco	\$ 0	\$ 117,580,400
Whitney	\$ 7,900	\$ 233,357,000
Basin Total	\$ 7,499,200	\$ 703,055,800
<b>Colorado River Basin</b>		
Hords Cheek	\$ 0	\$ 937,000
O.C. Fisher	\$ 0	\$ 2,376,000
Basin Total	\$ 0	\$ 3,313,000
<b>Guadalupe-San Antonio River Basin</b>		
Canyon	\$ 70,652,800	\$ 299,196,300
San Antonio	(no est.)	\$ 117,515,000
Basin Total	\$ 70,652,800	\$ 416,711,300



**Table 7**  
**Fort Worth District**  
**Annual Flood Damages Prevented Through FY 2002**  
**Current Dollars**  
**(Not Adjusted For Inflation)**

<b>PROJECT</b>	<b>FY 2002 DAMAGES PREVENTED</b>	<b>CUMULATIVE BENEFITS THROUGH FY 2002</b>
<b>Neches River Basin</b>		
Sam Rayburn	\$ 43,705,600	\$ 760,023,500
Basin Total	\$ 43,705,600	\$ 760,023,500
<b>Red River Basin</b>		
Cooper	\$ 3,649,800	\$ 9,082,500
Lake O'The Pines	\$ 4,082,600	\$ 24,882,000
Wright Patman	\$ 0	\$ 13,859,000
Basin Total	\$ 7,732,400	\$ 47,823,500
<b>Trinity River Basin</b>		
Bardwell	\$ 581,100	\$ 13,997,600
Benbrook	\$ 228,581,100	\$ 3,974,542,000
Grapevine	\$ 459,447,100	\$ 5,499,652,000
Joe Pool	\$ 70,482,200	\$ 1,098,390,000
Lavon	\$ 12,845,100	\$ 240,313,900
Navarro Mills	\$ 2,071,600	\$ 51,660,400
Lewisville		
and Ray Roberts	\$ 2,414,645,700	\$ 22,521,010,600
Basin Total	\$ 3,188,653,900	\$ 33,399,566,500
<b>Colorado River Basin *</b>		
Marshall Ford	\$ 15,296,400	\$ 296,943,600
Twin Buttes	\$ 0	\$ 1,118,000
Basin Total	\$ 15,296,400	\$ 298,061,600
Grand Total	\$ 3,333,540,300	\$ 35,628,555,200

\* Built by Bureau of Reclamation but under Corps of Engineers flood control jurisdiction.

## **2. ANNUAL FLOOD DAMAGES, BY STATE, PREVENTED BY CORPS PROJECTS.**

Flood damages prevented by Fort Worth District projects during FY 2002 in the State of Texas was \$3,333,540,300.

## **3. SPECIAL RESERVOIR OPERATIONS.**

**(a) General.** Moderate to severe flooding occurred throughout the FY 2002. Details of flood operations, drought conditions, and deviations from approved Water Control Plans are described in the following paragraphs.

### **(b) Flood Control and Drought Operations.**

**(1) General.** The U. S. Army Corps of Engineers, Fort Worth District, operates twenty-five lakes in the State of Texas. These lakes are located in six major river basins and are operated to provide for flood control, water supply, hydropower, and recreational activities. Three of these lakes are located in the Red River Basin, two in the Neches River Basin, eight in the Trinity River Basin, nine in the Brazos River Basin, two in the Colorado River Basin, and one in the Guadalupe River Basin. The following provides an overview of the flood events and the drought conditions in the District, the impacts on Corps' lakes and some of the coordination that was required.

**(2) Sulphur River Basin.** The Sulphur River Basin is located in northeastern Texas and flows into the Red River. The basin experienced above normal rainfall during FY 2002. Cooper Lake received 48.05 inches of rainfall during the Fiscal Year, or 6% above normal, Wright Patman Lake received 58.93 inches, or 35% above normal, and Lake O'the Pines received 49.23 inches, or 5% above normal. The inflows into the three lakes varied from 1% above normal to 35% above normal. There were three floods during FY 2002.

**(3) Neches River Basin.** The Neches River Basin is located in eastern Texas. Sam Rayburn Reservoir received 49.77 inches of rainfall during FY 2002 or 14% below normal. However, inflow for the fiscal year was 7% above normal. There was only one flood during FY 2002.

**(4) Trinity River Basin.** The Trinity River Basin contains what may be one of the most complex flood control systems in the country and one of the more challenging to manage. The river and its tributaries flow through two major cities and a mid-cities area of 4.2 million people. The basin's diverse flood protection system includes lakes, levees, channel improvements and local flood protection projects. Although there are eight flood control lakes in the basin, only 33% of the drainage area is controlled. Rainfall within the

basin averaged near normal for FY 2002. However, the District Lakes in the basin experienced inflows that were about 14% above normal. As a result, the basin conservation storage increased from 1,983,800 acre-feet, or 86% at the beginning of the year to 2,031,500 acre-feet, or 88% at the end of the year. Moderate flooding occurred within the Trinity River Basin throughout the year.

**(5) Brazos River Basin.** The Brazos River Basin is located west of the Trinity River and flows from north central Texas southeasterly to the Gulf of Mexico. The District Lakes in the basin experienced rainfall that was 12% below normal and inflows that were 33% below normal. However, the basin conservation storage increased from 1,093,000 acre-feet, or 85% at the beginning of the year to 1,133,600 acre-feet, or 88% at the end of the year. The basin experienced moderate flooding at various times throughout the year.

**(6) Colorado River Basin.** The Colorado River Basin is located west of the Brazos River and flows generally southeasterly to the Gulf of Mexico. O.C. Fisher Lake received 20.27 inches of rainfall, or about 4% below normal for the year. The inflow was only 7,700 acre-feet, or 71% below normal. O.C. Fisher Lake remained in the dead pool for the entire year. Hords Creek Lake received 23.81 inches of rainfall, or 7% below normal for the year. The inflow into Hords Creek Lake was only 1,300 acre-feet, or 64% below normal. As a result, the conservation storage in Hords Creek Lake was about 990 acre-feet, or 17% at the beginning of the year and about 50 acre-feet, or 1% at the end of the year. There were no floods during FY 2002.

**(7) Guadalupe River Basin.** The Guadalupe River Basin, located west of the Colorado River, is one of the smaller basins and only has one flood control lake. Canyon Lake controls only 28 percent of the basin above Victoria, Texas. The Blanco and San Marcos watersheds also generate major runoff. For this reason, controlling flows that pass through Cuero and Victoria is difficult at best and often impossible. There were two floods in FY 2002. The following is a description of the worst flood in the history of Canyon Dam.

Canyon Dam experienced the worst flood in its 40-year history during the summer of 2002. A low-pressure system migrated west from Florida to Texas in late June. This system stalled over Central Texas. From 29 June to 6 July, tropical moisture was pulled inland from the Gulf of Mexico causing heavy rainfall. Storms repeatedly dumped rain on an area from southwest of San Antonio to the northern Hill Country causing tremendous rainfall accumulations. Some areas of the Guadalupe River Basin above Canyon Lake received more than 50 inches of rain during the seven-day period. Between 8 July and 17 July, three more rounds of showers and thunderstorms occurred over the region. Although the rains during the second period were not nearly as heavy as that of the first, runoff from these storms aggravated the ongoing flooding problems. The average rainfall

over the Canyon Lake watershed was 22 inches, resulting in approximately 700,000 acre-feet of runoff into the reservoir. This volume of water was enough to fill the flood control pool twice. The water level rose over 40 feet, and peaked almost 7.5 feet above the spillway crest. The maximum discharge over the spillway was about 66,800 cfs, while the channel capacity of the Guadalupe River at New Braunfels, downstream of Canyon Dam is 12,000 cfs. The high spillway flow caused millions of dollars in damages below Canyon Dam.

July is normally the driest of the non-winter months in South Texas, but July 2002 was not normal. By the end of the day on 1 July, San Antonio had already experienced its wettest July ever and the second rainiest month and day on record. Scattered rains that began as early as 27 June in the Hill Country spread to all of South Central Texas. Widespread and disastrous flooding developed on four major river basins and two reservoirs. Numerous high water rescues took place along the flooding rivers. People and pets were rescued from camps, cars, homes, and vacation resorts across the flooded areas during the first week of July. Homes, businesses, roads, and bridges were destroyed in the floodwaters. Evacuations were widespread in several counties. Extensive damages to crops, livestock, and agricultural equipment occurred on the Medina, San Antonio, Nueces, Blanco, San Marcos, and Guadalupe Rivers. Canyon and Medina reservoirs spilled over the emergency spillways. Officials estimated damage to 48,000 homes and as much as 1 billion dollars in damages. Twenty counties were declared disaster areas. Seven fatalities were attributed to the flooding.

A low-pressure system migrated west from Florida to Texas in late June. This system stalled over South Central Texas. From 29 June to 6 July, tropical moisture was pulled inland from the Gulf of Mexico and the orographic lift provided by the Balcones Escarpment caused widespread heavy rainfall. Rains moved from south to north repeatedly causing tremendous rainfall accumulations on an area from southwest of San Antonio to the northern Hill Country. The low-pressure system moved north on 5 July, only to stall again between Abilene and Brownwood. The system produced heavy rains in this area on 6 July. The low-pressure system finally moved northwest and weakened, ending the period of heavy rain in the Hill Country.

On 8 July, a weak tropical wave of low pressure moved inland along the Texas coast, bringing additional showers and thunderstorms to much of South and Central Texas. On 12 July, a weak cold front moved into North Texas and stalled. Storms developed along this front and moved south, bringing additional showers to much of the Hill Country. Finally, a weak trough of low pressure moved across North Texas on 17 July, bringing another round of showers and thunderstorms over the region. Although, the rains between 8 and 17 July were not nearly as heavy as those of the first series, runoff from these storms aggravated the ongoing flooding problems.

The main part of the storm event, between 29 June and 6 July, was concentrated in Kendall County and surrounding counties. Rainfall intensities of 3 inches per hour were common. A volunteer weather observer in Waring, Kendall County, on the Guadalupe River above Canyon Lake, recorded 14.05 inches of rainfall during a seven-hour period on the morning of 30 June. The same observer reported 45.41 inches of rainfall during the seven-day period. From NEXRAD, the estimated average rainfall over the Canyon Lake watershed was about 22 inches between 29 June and 6 July. A few areas near Center Point in Kerr County may have received over 50 inches.

Torrential rains caused flooding of historic proportions on south Texas rivers. Major to record flooding occurred along portions of all the rivers in the Hill Country. Damage from flash flooding and headwater flooding in Wimberley on the Blanco River and in Kerrville on the Guadalupe River was extensive. Some communities were isolated by the floodwaters in the upper Guadalupe River for a day or more. Damage on the Guadalupe River below Canyon Dam was catastrophic in some locations.

Widespread rainfall across Kerr County and Kendall County sent five flood waves down the Guadalupe River into Canyon Lake in the first week of July. The highest peak, of approximately 110,000 cfs, occurred on 5 July. During the first nine days in July, the total inflow into Canyon Lake was about 700,000 acre-feet of floodwater.

Between 30 June and 31 July, the total computed inflow was 872,000 acre-feet. This volume of water is equal to 11.5 inches of runoff, almost 50 percent of the total rainfall, which is enough to have more than filled the flood control pool twice. Due to saturation of the watershed, the Guadalupe River and its tributaries continued to run well above normal for many more weeks.

On 28 June, before the flooding began, Canyon Lake was at elevation 908.38 feet NGVD or 0.62 feet below the top of conservation pool. The heavy rains and high inflow filled the lake to the top of the flood pool, elevation 943.0 feet NGVD, at 1530 hours on the Fourth of July. The waves of floodwater continued to raise the lake level above the spillway crest. The lake peaked on 6 July at elevation 950.32 feet NGVD. At this elevation, the lake level was 7.32 feet above the spillway crest, having risen nearly 42 feet in just over a week. The maximum discharge over the spillway was about 66,800 cfs, whereas the control flow in the downstream channel at New Braunfels, Texas was 12,000 cfs.

On the evening of 5 July, the lake was forecast to rise several feet above the flood pool. In an attempt to minimize the flow over the spillway, flood releases were initiated. During the morning of 6 July, the releases had to be stopped due to surging in the stilling basin. The surging was caused by backwater from the spillway discharges. Because debris from the spillway had been carried into the river creating a partial dam, flood releases could not be resumed until 10 August and only at a limited rate. Releases with the

floodgates fully open were not made until 15 August. By then, the lake level had dropped below the spillway crest. It was not until 23 September that the lake level was lowered to the top of conservation pool, elevation 909.0 feet NGVD.

(c) **Deviations from Water Control Plans.** During the year, the Fort Worth District requested three deviations from the approved Water Control Plans for its lake projects. In general, these deviations were requested because of inspections, construction work, spraying for insects, protection of government property, and recreation.

#### **4. HYDROPOWER PRODUCTION.**

Hydropower production by project for Fiscal Years 1998 through 2002 is shown in table 8. All values shown below are in units of Gigawatt Hours (GWH).

**Table 8**  
**Fort Worth District**  
**Hydropower Production By Project**  
**For Fiscal Years 1998 Through 2002**  
**(GWH)**

<b>Project</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Sam Rayburn	160.0	170.5	57.3	165.0	148.4
Town Bluff (R.D. Willis)	39.1	35.4	36.8	29.3	33.1
Ray Roberts *	2.8	3.6	3.8	2.2	3.1
Lewisville *	11.4	8.9	3.9	8.0	10.4
Whitney	48.8	13.0	9.3	37.3	30.7
Canyon *	23.2	16.3	4.8	28.0	13.9
<b>Total</b>	<b>285.3</b>	<b>247.7</b>	<b>115.9</b>	<b>269.8</b>	<b>239.6</b>

\* Non-Federal Hydropower Production

#### **5. NAVIGATION ACTIVITIES.**

Not applicable

#### **6. WATER SUPPLY STORAGE.**

Water supply information by project is shown in table 9.

**Table 9**  
**Fort Worth District**  
**Water Supply Allocations**  
**For Fiscal Years 2001 Through 2002**  
**(Acre-Feet)**

PROJECT	AMOUNT OF STORAGE ALLOCATED	AMOUNT OF STORAGE CONTRACTED	NUMBER OF CONTRACTS (USERS)	AMOUNT SUPPLIED	
				(FY 2001)	(FY 2002)
Aquilla	6,802	6,802	1	2,968	3,165
Bardwell	42,800	42,800	1	8,081	4,758
Belton	372,700	372,700	2	61,163	55,076
Benbrook	72,500	72,500	3	44,955	26,427
Canyon	366,400	366,400	1	18,240	19,120
Cooper	273,000	273,000	3	4,720	7,526
Georgetown	29,200	29,200	1	16,677	20,783
Granger	37,900	5,128	1	4,413	2,397
Grapevine	161,250	161,250	3	33,303	51,043
Hords Creek	5,780	5,780	1	233	154
Joe Pool	142,900	21,435	1	4,551	4,521
Lake O'the Pines	250,000	250,000	1	12,149	6,252
Lavon	380,000	380,000	1	248,852	246,322
Lewisville	436,000	436,000	2	140,980	154,675
Navarro Mills	53,200	53,200	1	7,121	7,076
O.C. Fisher	80,400	80,400	1	397	516
Proctor	31,400	31,400	1	11,024	7,791
Ray Roberts	799,600	415,784	2	16,449	9,667
Sam Rayburn	43,000(1)	43,000(1)	2	0	0
Somerville	143,900	143,900	1	10,116	3,198
Stillhouse	204,900	204,900	1	6,217	6,688
Town Bluff	(1)	(1)	1	1,139,901	1,345,587
Waco	104,100	104,100	2	31,215	31,504
Whitney	50,000	50,000	1	682	0
Wright Patman	216,500(2)	91,263	1	47,139	45,882

(1) LNVA is permitted to withdraw from the Town Bluff project an amount not to exceed 2,000 cfs. This lake acts as a re-regulation dam for Sam Rayburn power releases.

(2) Maximum available under the operating rule curve. The Second contract with the City of Texarkana specifies that storage is based on "total operating rule curve storage space". A third contract with Texarkana supercedes this second contract and is effective when the pool raise is accomplished.

## 7. PROJECT VISITATION.

Project visitation for both the Fort Worth District Corps' lakes and Section 7 lakes is presented in table 10. Visitor hours are presented for the period FY 1998 through FY 2002. Project visitation is extrapolated from the estimated total hours that each visitor spent at each lake.

**Table 10**  
**Fort Worth District**  
**Annual Project Visitation**  
**For Fiscal Years 1998 Through 2002**  
**(1000's Visitor Hours)**

<b>LAKE PROJECT</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Aquilla	202	208	200	211	296
Bardwell	953	1,297	822	1,012	925
Belton	10,749	12,478	10,493	12,383	14,384
Benbrook	6,829	5,102	4,653	4,088	4,104
Canyon	4,679	4,987	5,484	4,797	1,962
Cooper	1,932	1,823	1,871	3,445	3,282
Georgetown	3,837	4,222	4,220	4,632	3,640
Granger	1,134	1,141	1,070	1,237	1,513
Grapevine	4,203	4,839	3,602	4,298	6,053
Hords Creek	2,427	2,530	2,485	2,517	2,653
Joe Pool	4,672	5,058	8,726	7,828	6,081
Lake O'the Pines	6,720	7,802	10,112	8,550	7,958
Lavon	6,232	5,436	6,239	5,302	4,570
Lewisville	12,953	13,423	11,508	12,404	11,823
Navarro Mills	4,068	4,665	4,288	2,800	2,069
O.C. Fisher	2,397	3,059	3,661	3,167	4,966
Proctor	2,563	2,326	1,844	2,088	1,782
Ray Roberts	21,974	26,785	22,946	24,073	21,813
Sam Rayburn	17,489	17,377	16,962	16,359	15,071
Somerville	15,316	18,211	16,815	15,599	21,396
Stillhouse Hollow	2,379	2,660	2,230	2,465	2,919
Town Bluff	4,186	4,389	4,796	7,128	4,778
Waco	3,300	4,611	4,076	2,991	2,834
Whitney	6,392	6,190	6,064	5,208	5,838
Wright Patman	13,248	13,033	13,578	10,236	11,005
Marshall Ford *	---	---	---	---	---
Twin Buttes *	---	---	---	---	---
<b>Total</b>	<b>160,834</b>	<b>173,652</b>	<b>168,745</b>	<b>164,818</b>	<b>163,715</b>



\* These are Section 7 lakes.

## **8. COOPERATIVE PROGRAMS.**

**(a) National Weather Service.** The Fort Worth District transferred \$80,648 to the National Weather Service (NWS) during FY 2002. The NWS maintains a total of 131 weather stations incorporated within the reimbursable network program. Rainfall summaries and additional hydrometeorological information are transmitted to the District Office via Automated Field Observations and Services (AFOS).

### **(b) U.S. Geological Survey.**

**(1) General.** The U.S. Geological Survey (USGS) performed operation and maintenance for all stream flow, lake level, and water quality stations within the Fort Worth District. In addition to the cooperative stream-gaging program, the USGS under memorandum of agreement provided operation and maintenance service to the Fort Worth District Data Collection Platform network. The USGS operated 113 stream flow gages and 21 water quality stations in FY 2002. Also, the USGS maintains 92 tipping bucket rain gages at stream flow gages that collect rainfall data at 15-minute intervals.

**(2) Funds.** The total cost of the stream-gaging program and for the operation and maintenance of the Data Collection Platform network program in FY 2002 was \$986,958.

## **9. SEDIMENT ACTIVITIES.**

The Texas Water Development Board (TWDB) completed volumetric surveys on Granger, Aquilla, Proctor and Grapevine Lakes in fiscal year 2002. The Brazos River Authority (BRA) sponsored Granger, Aquilla and Proctor Lakes surveys and shared the 50 percent cost of the surveys established by Section 22 of the Water Resources Development Act of 1974. The Dallas County Park Cities Municipal Utility District was the local sponsor for the Grapevine Lake volumetric survey and shared the 50 percent cost of the survey.

## **10. WATER CONTROL STAFFING.**

**Table 11**  
**Fort Worth District**  
**Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone Number</b>	<b>Grade</b>
Paul Rodman	CESWF-OD-L	Chief, Water Control	817-886-1538	GS-13
Judy Harris	CESWF-OD-L	Support Assistant	817-886-1539	GS-06
Jerry Cotter	CESWF-OD-L	Hydraulic Engineer	817-886-1549	GS-12

**Table 11**  
**Fort Worth District**  
**Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone Number</b>	<b>Grade</b>
Bob Gergens	CESWF-OD-L	Hydraulic Engineer	817-886-1542	GS-12
Fred Jensen	CESWF-OD-L	Hydraulic Engineer	817-886-1543	GS-11
Tom Johnston	CESWF-OD-L	Hydraulic Engineer	817-886-1609	GS-12
Shah Khan	CESWF-OD-L	Hydraulic Engineer	817-886-1541	GS-12
Paul Lauderdale	CESWF-OD-L	Hydraulic Engineer	817-886-1547	GS-11
Jim McClain	CESWF-OD-L	Hydraulic Engineer	817-886-1536	GS-12
Minnie Nickerson	CESWF-OD-L	Hydrologic Technician	817-886-1537	GS-07
Steve Pilney	CESWF-OD-L	Hydraulic Engineer	817-886-1610	GS-12
John Rael	CESWF-OD-L	Hydraulic Engineer	817-886-1545	GS-12
Lynne Rednour	CESWF-OD-L	Hydrologic Technician	817-886-1546	GS-07
Mike Schwind	CESWF-OD-L	Hydraulic Engineer	817-886-1540	GS-12
Rey Sorgee	CESWF-OD-L	Hydrologist	817-886-1544	GS-12

**SECTION VII**

**GALVESTON DISTRICT  
WATER CONTROL ACTIVITIES**

## SECTION VII – GALVESTON DISTRICT WATER CONTROL ACTIVITIES

### **1. ANNUAL FLOOD DAMAGES PREVENTED PER RIVER BASIN.**

Annual flood damages prevented by basin and project for FY 02 are shown in table 12.

**Table 12**  
**Galveston District**  
**Annual Flood Damages Prevented (\$000) Through FY 02**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

<b>PROJECT</b>	<b>FY 02 DAMAGES PREVENTED</b>	<b>CUMULATIVE BENEFITS THROUGH FY 02</b>
Taylors Bayou Basin		
Port Arthur (Hurricane –Flood)	185	6,457
San Jacinto River Basin		
Addick & Barker	23,300	1,660,691
Brays Bayou	25	290,170
White Oak Bayou	0	34,054
Vince Bayou	1,400	18,260
Sims Bayou	144,400	344,400
Moses Lake		
Texas City, Texas (Hurricane –Flood)	85	10,325
Jones Bay		
Highland Bayou	0	0
Gulf of Mexico		
Galveston Seawall	200	400,405
Old Brazos River Basin		
Freeport (Hurricane –Flood)	0	8,170
Lavaca River Basin		
Hallettsville	5	652

**Table 12**  
**Galveston District**  
**Annual Flood Damages Prevented (\$000) Through FY 02**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

<b>PROJECT</b>	<b>FY 02 DAMAGES PREVENTED</b>	<b>CUMULATIVE BENEFITS THROUGH FY 02</b>
Colorado River Basin		
Matagorda	0	844
Nueces River Basin		
Three Rivers	304	307
San Fernando Creek Basin		
Tranquitas Creek	0	5,333
San Diego Creek	0	2,908
<b>Total</b>	<b>169,904</b>	<b>2,782,976</b>

**2. ANNUAL FLOOD DAMAGES, BY STATE, PREVENTED BY CORPS PROJECTS.**

Annual flood damages prevented by Corps projects during FY 02 in the state of Texas for our district were \$169,904,000.

**3. SPECIAL RESERVOIR OPERATIONS.**

A deviation to reservoir operations was made on 10/22/01 for the City of Houston to complete work on a bridge across Buffalo Bayou for the removal of an earthen dam and installation of pipe on the bridge. Releases from the reservoirs were lowered to allow for the completion of this project.

A deviation to reservoir operations was made on 12/19/01 for the City of Houston Parks Department to work on some cross over bridges along Buffalo Bayou and install bank erosion protection near Sabine Street. Reservoir releases were reduced to allow for utilization of their construction platforms.

A deviation from the approved Water Control plan for Addicks and Barker Reservoirs was made on 04/25/02 to store water for the 2002 Buffalo Bayou Regatta. This is an annual request for our assistance to provide water for this canoeing event. Releases were initiated on the morning of 5/3/02.

There were no other significant deviations made during the physical year. The reservoirs were not impacted by these deviations.

#### **4. HYDROPOWER PRODUCTION.**

There are no Hydropower projects.

#### **5. NAVIGATION ACTIVITIES.**

Up-to-date navigation statistics are available at web site [www.iwr.usace.army.mil/ndc](http://www.iwr.usace.army.mil/ndc) .

#### **6. WATER SUPPLY STORAGE.**

There is no water supply storage associated with the Galveston Districts projects.

#### **7. LAKE ATTENDANCE.**

Addicks and Barker Reservoirs serve as major recreational areas for the Houston Metropolitan Area. Some of the facilities located in Addicks Reservoir are: baseball fields, soccer fields, private shooting range, 3-18 hole golf courses, velodrome (bicycle track), hike and bike trails, wildlife viewing facility and approximately 2000 picnic tables. There were approximately 2,436,561 visits to these facilities. Barker Reservoir encompasses: baseball fields, soccer fields, a public shooting range, a model airplane airport and approximately 200 picnic tables. There were approximately 588,267 visits to these facilities. Both reservoir facilities sponsor international and national events. Lake attendance is presented in table 13.

**Table 13  
Galveston District  
Annual Lake Attendance  
For Fiscal Years 1998 Through 2002  
(1000's Visitor Hours)**

<b>LAKE PROJECT</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Addicks Reservoir	2,124	1,814	4,042	2,921	6,722
Barker Reservoir	738	556	56	596	1,623
<b>Total</b>	<b>2,862</b>	<b>2,370</b>	<b>4,098</b>	<b>3,517</b>	<b>8,345</b>

## **8. COOPERATIVE PROGRAMS.**

- a. **National Weather Service.** The cooperative program with the NWS provides for the operation and maintenance of precipitation gages and for the transmission of rainfall summaries. The total program cost for FY 2002 was \$7,194. The total program cost for FY 2003 is estimated at \$7,985.
- b. **U.S. Geological Survey.** Two cooperative programs are currently in existence with the USGS. One provides the operation and maintenance of stream gages and the second provides the operation and minor maintenance for Data Collection Platforms. The total cost of these programs for FY 2002 was \$358,805. The total cost for these programs for FY 2003 is estimated at \$398,803.

## **9. SEDIMENT ACTIVITIES.**

A sediment policy was established in 1985 by the District to provide guidance relative to settling basins or alternative control methods on inflowing streams to reduce velocity and essentially preclude the permanent deposition of sediment in the Federally-owned lands of Addicks and Barker Reservoirs.

No inspection of sediment depositions was made during FY 02.

## **10. WATER CONTROL STAFFING.**

**Table 14  
Galveston District  
Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone #.</b>	<b>Grade</b>
Charles Scheffler	CESWG-OD-O	Reservoir Operations	409-766-3113	GS-12
Karl Brown	CESWG-OD-O	Reservoir Operations	409-766-3069	GS-12

## **SECTION VIII**

### **LITTLE ROCK DISTRICT WATER CONTROL ACTIVITIES**



## SECTION VIII – LITTLE ROCK DISTRICT WATER CONTROL ACTIVITIES

### 1. ANNUAL FLOOD DAMAGES PREVENTED PER RIVER BASIN.

The annual flood damages prevented by river basin during FY02 in the Little Rock District are shown in table 15.

**Table 15**  
**Little Rock District**  
**Annual Flood Damages Prevented**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

<b>Basin</b>	<b>FY02 Damages Prevented</b>
<b>ARKANSAS RIVER</b>	
Little Rock District projects	\$6,972,700
Tulsa District projects	\$9,790,700
<b>WHITE RIVER</b>	
Little Rock District projects	\$41,008,300
<b>LITTLE RIVER</b>	
Little Rock District projects	\$2,548,100
Tulsa District projects	\$2,021,700
<b>Total Flood Damages Prevented FY02</b>	<b>\$62,341,500</b>

## 2. ANNUAL FLOOD DAMAGES, BY STATE, PREVENTED BY CORPS PROJECTS.

The annual flood damages prevented in each state served by the Little Rock District during FY02 are shown in table 16.

**Table 16**  
**Little Rock District**  
**Annual Flood Damages Prevented In Each State**  
**(Dollars)**

<b>State</b>	<b>FY02 Damages Prevented</b>
<b>ARKANSAS</b>	
Levees, Arkansas River (Little Rock District)	\$5,164,900
Reservoirs, Arkansas River (Little Rock District)	\$1,807,800
Reservoirs, Arkansas River (Tulsa District)	\$9,790,700
Levees, White River (Little Rock District)	\$3,797,300
Reservoirs, White River (Little Rock District)	\$9,904,800
Reservoirs, Little River (Little Rock District)	\$2,548,100
Reservoirs, Little River (Tulsa District)	\$2,021,700
<b>ARKANSAS TOTAL</b>	<b>\$35,035,300</b>
<b>MISSOURI</b>	
Levees, White River (Little Rock District)	\$142,000
Reservoirs, White River (Little Rock District)	\$27,164,200
<b>MISSOURI TOTAL</b>	<b>\$27,306,200</b>
<b>Total Damages Prevented For FY02</b>	<b>\$62,341,500</b>

### **3. SPECIAL RESERVOIR OPERATIONS.**

**a. General.** Rainfall over the Little Rock District in FY2002 was above average in most basins. Rainfall for the White River basin was 3.6 inches above normal. All of the six White River basins were 5 to 8 inches above normal except for the Clearwater basin, which was 11 inches below normal. Rainfall for the Arkansas River projects was 5.2 inches above normal. The Arkansas River projects ranged from 15 inches above normal at Lock and Dam 3 to 4 inches below normal at Lock and Dam 8. The Little River Basin experienced near normal rainfall with basin averages being 0.7 inch below normal.

#### **b. White River System.**

##### **(1) Flood Control Operations.**

**(a)** In general, total rainfall for the water year was above average at all projects. Specifically, total rainfall for the water year was 7.8 inches above average at Beaver Lake, 4.8 inches above average at Table Rock Lake, 7.4 inches above average at Bull Shoals Lake, 8.3 inches above average at Norfork Lake, and 5.1 inches above average at Greers Ferry Lake. During the wettest period, December 2001 through May 2002, rainfall in all basins averaged 8.0 inches above average and ranged from 7.9 inches above average in the Beaver and Table Rock basins to 9.3 inches above average in the Norfork basin.

**(b)** Water Year 2002 began with all five multipurpose projects in their conservation pools with an average 77 percent conservation storage utilized. Specifically, Beaver Lake started at elevation 1112.6, 77% conservation storage utilized; Table Rock Lake started at elevation 909.6, 81% conservation storage utilized; Bull Shoals Lake started at elevation 648.3, 75% conservation storage utilized; Norfork Lake started at elevation 543.6, 75% conservation storage utilized; and Greers Ferry Lake started at elevation 455.2, 75% conservation storage utilized. As releases for project purposes exceeded inflow, all lakes continued to recede and reached their lowest elevations of the water year as follows: Beaver, elevation 1111.1 on 16 November with 73% conservation storage utilized; Table Rock, elevation 908.7 on 12 December with 78% conservation storage utilized; Bull Shoals, elevation 647.7 on 14 November with 72% conservation storage utilized; Norfork, elevation 543.1 on 16 November with 74% conservation storage utilized; and Greers Ferry, elevation 454.4 on 23 November with 71% conservation storage utilized. With average to above average rainfall occurring from December 2001 through February 2002 all lakes experienced rises with Bull Shoals and Greers Ferry reaching conservation pool in December 2001 and Beaver, Table

Rock and Norfolk reaching conservation pool in February 2002. From March 2002 through May 2002 all basins again received above average rainfall averaging 6.1 inches above average. This inflow in conjunction with the lowering of downstream regulating stages beginning in mid-April caused all lakes to rise and reach their highest elevations of the water year as follows: Beaver, elevation 1130.4 on 8 April with 104% flood storage utilized; Table Rock, elevation 923.7 on 18 June with 46% flood storage utilized; Bull Shoals, elevation 688.8 on 18 June with 81% flood storage utilized; Norfolk, elevation 578.5 on 30 May with 93% flood storage utilized; and Greers Ferry, elevation 474.1 on 23 April with 47% flood storage utilized. As Beaver Lake exceeded its top of flood control pool, a surcharge operation was implemented for three days (8-10 April 2002). The maximum project release was 29,300 cubic feet per second (cfs) consisting of turbine releases of 8,800 cfs and a spillway release of 20,500 cfs. Evacuation of all flood pools continued through the summer with seasonal pool elevation being reached in July at Table Rock, August at Greers Ferry and late September at Beaver, Bull Shoals and Norfolk Lakes. By the end of the water year all lakes were at or near their seasonal pool elevation, 100% conservation storage utilized, except for Greers Ferry where continued conservation operations resulted in an end of water year elevation of 458.5, 86% conservation storage utilized.

- (c) Clearwater Lake during the period from December 2001 to early May 2002 experienced several minor rises utilizing between 5 % and 20 % of the flood control pool. Beginning May 7, 2002, a series of three rises occurred which caused the flood pool to fill to elevation 566.60 (0.40 ft. below the uncontrolled spillway crest) on May 20, 2002, and utilizing 99 % of the flood control pool. This elevation is the highest pool elevation the project has ever experienced, surpassing the old mark set in 1957 by approximately one foot. The floodwater was evacuated and the pool returned to elevation 500 ( seasonal conservation pool ) on August 1, 2002.

## **(2) Low Dissolved Oxygen Impacts To Hydropower Releases.**

- (a) **General.** Reduced hydropower generation capacity continued at one of the five multipurpose projects during Water Year 2001 (the 2001 Low D.O. season) and into Water Year 2002. Maximum generation rates, recommended to the Southwestern Power Administration with the goal of maintaining dissolved oxygen in the hydropower releases at or above 4.0 parts per million, were discontinued at Table Rock on 26 December 2001. Oxygen depletion in the lower levels of the lakes impact generation capacity until lake turnover, on average occurring in early December, as was the case during Water Year 2001. Also during Water Year 2002 (the 2002 Low D.O. season) hydropower generation capacity was reduced at two of the five multipurpose projects.

Generation rates less than nameplate capacity were recommended beginning on 21 August at Norfork and 9 September at Table Rock. These recommendations occurred about the same time of year as experienced in the past. The Southwestern Power Administration voluntarily complied with all recommendations.

**(b) Plan of Operation for the 2000 Low Dissolved Oxygen Season.** The Ad Hoc Committee on Project Operations, White River, Arkansas, developed a Plan of Operation for the 2002 Low Dissolved Oxygen Season, White and North Fork Rivers, Arkansas dated July 2002. Actions outlined in the plan were aimed at maintaining a minimum 4.0 parts per million dissolved oxygen in the hydropower releases. These actions primarily consisted of blocking open turbine vents, spreading power loading across all available units, reducing the maximum loading of each unit, and injecting liquid oxygen.

**(c) Dissolved Oxygen and Temperature Monitoring Program.** In Water Year 2002, the dissolved oxygen and temperature monitoring program consisted of near-monthly lake profiles (dissolved oxygen and water temperature), from March through lake turnover, taken just upstream of the penstocks. Additional profiles were taken at Table Rock, Bull Shoals, and Norfork Lakes during the period of rapid change in dissolved oxygen concentration. Real time data was collected from both COE and USGS dissolved oxygen and/or temperature gages at Beaver (tailwater), Table Rock (tailwater), School of the Ozarks (approximately 5 miles downstream of Table Rock Dam), Bull Shoals (unit 4 and 5 penstocks and left and right banks tailwater), Fairview (approximately 3 miles downstream of Bull Shoals Dam), Shipps Ferry (approximately 36 miles downstream of Bull Shoals Dam), Norfork (unit 1 penstock and tailwater), Calico Rock (approximately 17 miles downstream of the confluence of the White and North Fork Rivers), Sylamore (approximately 34 miles downstream of the confluence of the White and North Fork Rivers), Greers Ferry (tailwater), and Pangburn (approximately 22 miles downstream of Greers Ferry Dam).

**(d) Low Dissolved Oxygen Impacts to Flood Control Operations.** There were no impacts to flood control operations during Water Year 2002 due to low dissolved oxygen.

### **(3) Deviations.**

**(a) White River.** There were six deviations to the water control plan at the White River multipurpose projects in Water Year 2002 as follows: flood control releases were curtailed at Greers Ferry on 25-27 January 2002 to provide

conductive releases for the Arkansas Game and Fish Commission to perform necessary bank stabilization work; the seasonal pool at Greers Ferry was changed to elevation 462.5 from 1 April to 30 September 2002 as an operational adjustment to offset hydropower losses associated with water supply reallocations; the seasonal pool at Bull Shoals was changed to elevation 657.0 from 15 April to 30 September 2002 in an attempt to improve natural fish productions conditions; flood control releases were curtailed at Bull Shoals on 10-31 May 2002 to retard the rate of fall of the pool so as to not exceed limits recommended by the Missouri Department of Conservation and the Arkansas Game and Fish Commission during the fish spawn and also curtail flood releases on 17-19 May to provide conducive releases for a private individual to perform necessary bank stabilization work; flood control releases were curtailed at Norfork on 8 June 2002 to provide conducive releases during the Arkansas Game and Fish Commission's 13<sup>th</sup> Annual Kid's Trout Fishing Derby; and the seasonal pool at Table Rock was changed to elevation 916.0 from 20 September through 31 October 2002 to facilitate construction on the Table Rock Auxiliary Gated Spillway project.

- (b) **Clearwater.** At the beginning of FY 2002 a deviation was in effect to raise the seasonal top of conservation pool from elevation 498 to 500. This deviation was extended until October 31, 2001 to allow the Arkansas Game and Fish Commission to complete downstream work requiring low flows. A deviation to raise the seasonal top of conservation pool from elevation 498 to 500 was authorized from May 12, 2002 through September 30, 2002. A deviation was authorized to curtail flood control releases from Clearwater Lake from May 10, 2002 through May 17, 2002 to permit repair of a downstream levee which had broken.

**c. Arkansas River System.**

- (1) **General.** Rainfall for this water year on the Arkansas River Basin in Arkansas was above the yearly averages (38 to 52 inches) at all projects except Murray Lock and Dam, Blue Mountain and Nimrod Lakes. However, rainfall averages at these three projects were just plus 1 to plus 2 percent. All other projects were at about 70 to 80 percent of normal rainfall. On a monthly basis, the wettest month was November at about 170 percent of average. On a seasonal basis, March through June was drier than normal as rainfall was at 65 percent of average. Flows at James W. Trimble L&D were 65 percent of average at 26,400 cfs, at Murray L&D flows were 77 percent of average at 37,200 cfs, and at Wilbur D. Mills Dam flows were 83 percent of average at 42,800 cfs. There were five flood events occurring in December, January-February, March, April, and April-June, in which economic benefits were run. The peak flow at James W. Trimble L&D (Van Buren) was

152,200 cfs and occurred on 08 April. Also, for the year, flows were above 100,000 cfs for 7 days and between 70,000 and 100,000 cfs for another 22 days. The peak flow at Murray L&D (Little Rock) was 225,000 cfs and occurred on 22 March. For the year, flows were above 150,000 cfs for 10 days, between 100,000 and 150,000 cfs for 15 days, and between 70,000 and 100,000 cfs for another 29 days. The peak flow at Wilbur D. Mills L&D was 205,100 cfs occurring on 11 April with flows above 150,000 cfs for 10 days, between 100,000 and 150,000 cfs for 22 days, and between 70,000 and 100,000 cfs for 46 days. There was one lock outage at Ormond Lock and Dam from high water on 20-22 March. Lock 1 and Lock 2 were out for scheduled maintenance from 26 August through 4 September. The Fort Chaffee Military Training Center hosted the 353d Engineer Group that conducted BRIDEX2002 (construction of floating bridge and river crossing exercise) on the Arkansas River just below Trimble Lock and Dam on 31 July. Flows were less than 30,000 cfs.

## **(2) Flood Control Operations.**

- (a) Blue Mountain Lake.** During FY 2002 Blue Mountain Lake experienced three significant rises. Rises occurred in December 2001 and February 2002 each of which utilized approximately 50 % of the flood control pool and were subsequently evacuated. A series of rises began on March 8, 2002 which caused the flood pool to fill to elevation 414.9 on May 11, 2002, utilizing 82 % of the flood control pool. The flood water was evacuated and the pool returned to elevation 387 (seasonal conservation pool) on June 10, 2002.
- (b) Nimrod Lake.** During FY 2002 Nimrod Lake experienced three significant rises. The pool rose to elevation 366.3 on December 21, 2002, utilizing 65 % of the flood control storage. It also rose to 356.3 (25 %) on February 4, 2002 and 363.9 (55 %) on April 25, 2002.

## **(3) Deviations.**

- (a) Mainstem.** There were two deviations to the Water Control plan of the Arkansas River in SWL during FY02. A deviation for Wilbur D. Mills (Pool 2) Lock and Dam was initiated on 23 January due to sedimentation at the approach to Joe Hardin Lock and Dam. Pool 2 was held to the limits of 162.5 to 163.0 (+1.0 foot above navigation pool) through 1 February for flows less than 45,000 cfs. Murray L&D was operated under a deviation starting on 04 July 2002 for pool limits of 249.5 to 250.0 (+1.0 foot above navigation pool) for flows less than 45,000 cfs in order to provide navigation depths near NM 147. This deviation was terminated on 13 September 2002 after Maintenance

Engineering Section indicated only minor encroachments (buoys moved in) still existed even though no dredging and clamming were done.

**(b) Blue Mountain Lake.** With the heavy rains in the early spring filling the flood pool to elevation 414.88 feet NGVD (81%) on 11 April, a deviation was requested and approved on 12 April to increase the regulating release from the agricultural season 2500 cfs (1 March-30 November) to the nonagricultural season 3500 cfs (1 December-28/29February) until the pool dropped to 40% full or 20 May. Evacuation to 40% full was accomplished by 2 May and the deviation was terminated.

**(c) Nimrod Lake.** From March 1, 2002 through September 30, 2002 the top of conservation pool was maintained at elevation 342 instead of being raised to elevation 345. This was done to allow growth of shoreline vegetation as part of a long-term fisheries enhancement program. Nimrod Dam Water Control Manual was completed and approved.

**d. Little River System.**

- (1) General.** Rainfall over the Little River Basin for FY 2002 was near the annual average. Above average rainfall did occur during the months of December and March. December was the wettest month with 3.6 inches above normal rainfall.
- (2) Flood Control Operations.** This year there were several minor rises of near 10% of flood storage utilized. There was two rises that exceeded 10% of flood storage. Gillham Lake experienced the greatest rise cresting with 36% of the flood control storage used. The year ended with a typically dry fourth quarter in which all of the Tri-lakes pools declined below conservation level.
- (3) Deviations.** There were seven deviations in the Little River basin during FY2002. The first deviation of the year provided releases for two separate canoe classes below Gillham Dam in October 2001. In December 2001, there was another deviation below Gillham Dam at the Highway 70/71 Bridge to allow contractors to place concrete for a new bridge. The third and fourth deviation was for a Kids Fishing Derby below Dierks in May and below DeQueen in June. The fifth deviation took place at Millwood, in early September 2002, where work was being done on the toe of the dam embankment. Here the pool elevation was lowered 0.2 foot to allow for easier access for vehicles without getting stuck in the mud. The final two deviations at DeQueen and Gillham required a zero release for project maintenance below the dams. While the gates were closed at DeQueen, a contractor installed a modification to the water supply intake structure. All deviations were successfully completed and provided the intended benefit to our customers.



#### **4. HYDROPOWER PRODUCTION.**

The annual net hydropower production at LRD plants in total GWH by fiscal year is shown in table 17.

**Table 17**  
**Little Rock District**  
**Hydropower Production By Project**  
**For Fiscal Years 1997 Through 2001**  
**(GWH)**

<b>Project</b>	<b>FY 98</b>	<b>FY 99</b>	<b>FY 00</b>	<b>FY 01</b>	<b>FY02</b>
Beaver	158.9	147.4	90.3	84.9	149.1
Table Rock	580.6	506.8	232.3	259.5	565.8
Bull Shoals	846.9	687.8	301.5	310.9	866.3
Norfork	182.8	149.4	66.3	78.1	245.4
Greers Ferry	156.3	112.1	80.4	89.2	199.0
Ozark	330.5	214.1	277.2	221.5	181.0
Dardanelle	499.7	364.7	480.3	604.0	625.0
<b>TOTALS</b>	<b>2,755.7</b>	<b>2182.4</b>	<b>1528.3</b>	<b>1648.1</b>	<b>2831.6</b>

#### **5. NAVIGATION ACTIVITIES.**

Up-to-date navigation statistics are available at web site <http://www.iwr.usace.army.mil/ndc/>.

## **6. WATER SUPPLY STORAGE.**

Water supply allocations, contracts, and usage for FY 01 and FY 02 are shown, by project, in table 18.

**Table 18**  
**Little Rock District**  
**Water Supply Allocations**  
**For Fiscal Years 2001 Through 2002**  
**(In Acre Feet)**

PROJECT NAME	AMOUNT OF STORAGE ALLOCATED	AMOUNT OF STORAGE CONTRACTED	NUMBER OF CONTRACTS (USERS)	AMOUNT SUPPLIED	
				(FY 01)	(FY 02)
Beaver	108,000	129,151	4	64,448	64,559
Table Rock	0.00	95	1	16	0
Bull Shoals	0.00	880	1	960	893
Norfork	0.00	2,400	1	4,380	3,987
Greers Ferry	0.00	10,839	**8	7,046	6,885
Blue Mountain	0.00	1,550	1	0	0
Nimrod	0.00	143	2	96	92
Dequeen	17,900	17,900 <sup>1</sup>	1	431	508
Gillham	20,600	20,600	1	1,442	1,407
Dierks	10,100	10,100	1	339	344
Millwood	150,000	150,000	1	77,974	74,230

\* \* City of Heber Springs is authorized to use 0.835 million gallons per day of Greers Ferry Lake for water supply due to relocation of its water supply intake from its original site.

<sup>1</sup>Only 610 acre-feet of the authorized water supply storage is under agreement .

## **7. LAKE ATTENDANCE.**

Annual lake attendance at all LRD projects is shown in table 19.

**Table 19**  
**Little Rock District**  
**Annual Lake Attendance**  
**For Fiscal Years 1998 Through 2002**  
**(1000's Visitor Hours)**

	1998	1999	2000	2001	2002
<b>Total</b>	158,860	152,368	149,868	154,086	155,665

## **8. COOPERATIVE PROGRAMS.**

- a. **National Weather Service.** The Little Rock District has a cooperative agreement with the National Weather Service Cooperative FC-16 Network for 74 rainfall and/or river stage reporting stations. Of these 74 stations, 27 are in the NWS Central Region Cooperative FC-16 Network and 47 are in the NWS Southern Region. Reports from these stations are used in forecasting stream flows for flood warnings and operation of reservoir projects. The FY2002 total operational and maintenance cost for the NWS/COE cooperative program was \$41,150. The FY 2003 operation and maintenance cost of the cooperative program is projected to be \$40,517.
- b. **U.S. Geological Survey.** The Little Rock District also has a cooperative agreement with the United States Geological Survey for stream gage data. During FY2002, 73 DCP stations were operated cooperatively by the USGS with the Corps. The FY2002 cost for the cooperative program with the USGS for the collection of stream flow data was \$543,100. In FY2003 the projected cost of the cooperative program is \$561,620, of which \$170,090 is with the USGS in Missouri and \$391,530 with the USGS in Arkansas.

## **9. SEDIMENT ACTIVITIES.**

- c. **Arkansas River.** The within-channel portions of the 247 sediment ranges on the mainstem of the Arkansas River are resurveyed periodically. In FY 2001 within-channel portions of sediment ranges were obtained in Pools 7, 8, 9, Dardanelle and Ozark for a total of 143 ranges. An analysis of past surveys of both channel and overbank portions is underway to determine future Arkansas River sediment range survey needs and to determine a realistic schedule for future survey acquisition. (b) Lakes. No sediment ranges were obtained during FY 2001 for the 12 SWL lakes. An analysis of sediment ranges in all SWL lakes, including Dardanelle and Ozark lakes on the Arkansas River, is being made to determine the extent of sedimentation and to determine a realistic schedule for future survey

acquisition. This analysis will result in a study report with recommendations and is scheduled to be completed in the last quarter of FY2001.

- d. Channel Maintenance.** Dredging of approximately 930,000 cubic yards was required in FY02. A contract dredge accomplished the dredging. Areas that required dredging included Pools 2, 3, 4, 5, 7, 9, Lake Dardanelle, Ozark Lake and the White River Entrance Channel. Government plant clammed approximately 60,000 cubic yards in Pools 2, 3, 4, 7, 8, 9, 13, Lake Dardanelle, and the White River Entrance Channel. Navigable depths were maintained following periods of high flows on the Arkansas River and during periods of low stages on the White River Entrance Channel/Mississippi River. Numerous Safety Zones were issued in FY02 due to construction of bendway weirs at the entrance to the White River Entrance Channel.

## **10. WATER CONTROL STAFFING.**

**Table 20  
Little Rock District  
Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone #.</b>	<b>Grade</b>
Jan Jones	CESWL-OP-R	Chief, Water Control	501-324-6235	GS-12
John Kielczewski	CESWL-OP-R	Reservoir Operations	501-324-6238	GS-12
Jim Cia	CESWL-OP-R	Reservoir Operations	501-324-6236	GS-11
Ken Rollins	CESWL-OP-R	Reservoir Operations	501-324-6237	GS-11
Steve Brewer	CESWL-OP-R	Reservoir Operations	501-324-6239	GS-12
Scott Walker	CESWL-OP-R	Reservoir Operations	501-324-6236	GS-09
Chris Reicks	CESWL-OP-R	Computer Processing	501-324-6239	GS-12
Mike Black	CESWL-OP-R	Computer Processing	501-324-6238	GS-12
Darrel Campbell	CESWL-OP-R	DCP Maintenance	501-324-5656	GS-08
Tim Crownover	CESWL-OP-R	DCP Maintenance	501-324-5656	GS-07

## **SECTION IX**

### **TULSA DISTRICT WATER CONTROL ACTIVITIES**

## SECTION IX – TULSA DISTRICT WATER CONTROL ACTIVITIES

### 1. ANNUAL FLOOD DAMAGES PREVENTED PER RIVER BASIN.

The annual flood damages prevented by river basin during FY02 in the Tulsa District are shown in table 21.

**Table 21**  
**Tulsa District**  
**Annual Flood Damages Prevented Through FY 02**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

<b>PROJECT</b>	<b>FY 02 DAMAGES PREVENTED</b>	<b>CUMULATIVE BENEFITS THROUGH FY 02</b>
Arkansas River Basin		
Arcadia	\$371,100	\$7,743,000
Big Hill	\$292,800	\$29,596,000
Birch	\$528,100	\$60,982,000
Canton	\$142,300	\$14,205,000
Cheney	\$144,000	\$23,704,000
Copan	\$5,937,400	\$361,969,000
Council Grove	\$3,700	\$72,535,000
El Dorado	\$161,000	\$112,848,000
Elk City	\$3,775,500	\$159,166,000
Eufaula	\$5,159,400	\$176,588,000
Fall River	\$2,621,900	\$132,355,000
Ft Gibson	\$1,072,900	\$111,525,000
Fort Supply	\$19,100	\$4,258,000
Great Salt Plains	\$65,800	\$70,888,000
Halstead KS Levee	\$0	\$4,583,000
Heyburn	\$368,600	\$25,574,000
Hulah	\$8,494,300	\$561,996,000
Iola Levee	\$0	\$15,924,000
John Redmond	\$85,000	\$292,801,000
Jenks Levee	\$0	\$2,618,000
Kaw	\$327,100	\$399,149,720
Keystone	\$474,600	\$586,511,000

**Table 21**  
**Tulsa District**  
**Annual Flood Damages Prevented Through FY 02**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

<b>PROJECT</b>	<b>FY 02 DAMAGES PREVENTED</b>	<b>CUMULATIVE BENEFITS THROUGH FY 02</b>
Marion	\$12,200	\$142,592,000
Markham Ferry (Hudson)	\$430,500	\$39,205,000
Oologah	\$8,045,500	\$305,083,000
Optima	\$0	\$11,000
Pensacola	\$518,200	\$104,036,000
Sanford	\$0	\$163,000
Skiatook	\$5,989,400	\$194,446,000
Tenkiller	\$938,300	\$75,643,000
Thunderbird (Norman)	\$221,400	\$35,700,000
Toronto	\$3,722,200	\$140,565,000
Tulsa/West Tulsa Levee	\$0	\$278,917,000
Wister	\$16,246,300	\$185,008,000
Wichita/Valley Center	\$0	\$95,000
Basin Total	\$66,168,400	\$4,823,858,000
Red River Basin		
Altus	\$46,600	\$11,016,000
Arbuckle	\$53,200	\$1,767,000
Broken Bow	\$2,783,500	\$26,025,000
Denison	\$4,006,600	\$178,380,000
Fort Cobb	\$72,400	\$5,334,000
Foss	\$14,400	\$7,069,000
Hugo	\$6,299,500	\$36,743,000
Lake Kemp	\$87,300	\$19,238,000
Mountain Park	\$30,000	\$1,228,000
McGee Creek	\$569,400	\$2,504,000
Pat Mayse	\$1,106,500	\$10,256,000
Pine Creek	\$3,538,100	\$27,995,000
Sardis	\$5,097,100	\$31,699,000
Waurika	\$1,728,900	\$62,701,000
Basin Total	\$25,433,600	\$421,956,000

## **2. ANNUAL FLOOD DAMAGES, BY STATE, PREVENTED BY CORPS PROJECTS.**

The annual flood damages prevented in each state served by the Tulsa District during FY02 are shown in table 22.

**Table 22**  
**Tulsa District**  
**Annual Flood Damages Prevented In Each State**  
**(Current Dollars)**  
**Not Adjusted For Inflation**

STATE	FY 02 DAMAGES PREVENTED
Oklahoma	\$65,888,400
Kansas	\$10,704,100
Texas	\$3,197,100
Arkansas	\$11,812,400
<b>Total</b>	<b>\$91,602,000</b>

- **FY 02 damages prevented by reservoirs alone = \$ 91,602,000**

## **3. SPECIAL RESERVOIR OPERATIONS.**

Average flows on the Arkansas River at W.D. Mayo Lock and Dam were about 57% of normal. Average flows on the Red River were estimated to be about 65% of normal. The drought conditions continued (from FY2001) in the Hulah Lake basin until rainfall in April and early May refilled the conservation pool. The Tulsa District convened the Interagency Drought Management Committee for Hulah Lake and had several meetings to discuss water conservation measures. The lake set a record low pool on 6 April. The conservation pool had refilled by 8 May.

- a. Least Terns. A District Least Tern Committee was formed in the fall of 2001. This committee is comprised of members from the Corps of Engineers, Southwestern Power Administration, United States Fish and Wildlife Service, Oklahoma



Department of Wildlife Conservation, and the Oklahoma Municipal Power Authority. The committee developed Management Guidelines to assist in making decisions concerning the protection of the Least Terns. Special operations were necessary in 2002 for a number of basins in support of the Endangered Species Act. On the Arkansas River, below Kaw Lake, minimum low flow releases using hydropower generation were necessary from 15 July until 2 August. Excess power releases were made to preclude the presence of predators near the islands where the birds nested. The seasonal pool plan and adequate inflows prevented the pool from being severely drawn down. Below Keystone Lake, minimum low flow releases using hydropower generation were required from 24 July through 12 August. The pool was higher than normal at Keystone at the beginning of the nesting season due to the I-40 bridge collapse. This combined with the seasonal pool and adequate inflows prevented the pool from being severely drawn down. On the Red River, excess hydropower releases were required from Lake Texoma to prevent 4-wheelers from disturbing the Least Tern nesting sites. This requirement focused on providing greater depths of water around islands on the weekends. Adequate inflows prevented the lake from being severely drawn down. No minimum flows were required below Eufaula Lake in 2002.

- b. I-40 Bridge Collapse. On 26 May 2002, the I-40 bridge over the Arkansas River suffered a partial collapse due to one of the piers being struck by a barge. Flows on the Arkansas River were restricted through the recovery and reconstruction period. This restriction caused us to hold floodwater in the flood pools at several lakes much longer than normal. Normal flows were allowed beginning about 19 June.
- c. The Arkansas River Navigation Study. The study is an on going joint feasibility study between Little Rock and Tulsa Districts to look at how the navigation system is operated. The study is examining possible operational changes that might improve the system's ability to effectively evacuate high water out of the upstream reservoirs. The goal of this study is to increase the number of days per year that the river is open to navigation, while reducing flood problems for farmers and property owners. The report on this study is due in the summer of 2003.

#### **4. HYDROPOWER PRODUCTION.**

Hydropower generation at Tulsa District projects for FY 1998 through FY 2002 is shown in table 23.

**Table 23**  
**Tulsa District**  
**Hydropower Production By Project**  
**For Fiscal Years 1998 Through 2002**  
**(GWH)**

<b>Project</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Denison	247.9	181.0	118.0	377.8	193.1
Broken Bow	160.8	204.7	92.6	171.9	201.0
SUB-TOTAL	408.7	385.7	210.6	549.7	394.1
Keystone	248.3	495.3	324.0	252.4	167.2
Fort Gibson	251.1	334.7	171.9	149.9	172.3
Webbers Falls	232.5	282.8	228.3	207.5	186.9
Tenkiller Ferry	137.0	159.6	96.0	107.5	121.9
Eufaula	346.2	416.8	216.9	342.8	202.2
Robert S. Kerr	635.9	857.1	570.1	533.6	488.4
SUB-TOTAL	1,851.0	2546.3	1,607.2	1593.7	1,338.9
<b>TOTAL</b>	<b>2,259.7</b>	<b>2,932.0</b>	<b>1,817.8</b>	<b>2,143.4</b>	<b>1,733.0</b>

**5. NAVIGATION ACTIVITIES.**

Up-to-date navigation statistics are available at web site [www.iwr.usace.army.mil/ndc](http://www.iwr.usace.army.mil/ndc)

**6. WATER SUPPLY STORAGE.**

Water supply allocations, contracts, and usages for FY 01 and FY 02 are shown, by project, in table 24.

a. **Arcadia Lake.** Tulsa District is working with the Department of Justice to reopen the Consent Decree entered into by the Federal government and the City of Edmond when the Arcadia Lake lawsuit was resolved in the mid-1990's. The City of Edmond has refused to repay the interest that has accrued from the end of the 10-year interest-free period on future-use water supply storage

as required by the Consent Decree and the Water Supply Act of 1958. The Consent Decree allows either party the right to reopen the case for disputes that arise.

b. **John Redmond Reservoir.** In 1975, the state of Kansas and the United States entered into a water supply contract. After the agreement was signed, it was determined that the sediment distribution in the lake was adversely impacting the conservation pool while the flood control pool was experiencing less than expected sedimentation losses. Funds were received in FY 00 and a reallocation study was initiated. Results of the new sediment projections developed in FY 01, the conservation pool will have to be raised 2 feet in order to make an equitable redistribution of sediment storage as required in the water supply contract. The draft Environmental Assessment (EA) will be sent out for public review in April 2002. Cultural resource work has been delayed and will not be completed until FY 03. Writing of the reallocation report was started in FY 02 and is scheduled for completion in FY 03.

c. **Broken Bow Lake.** The Water Resources Development Act of 1996 allowed for the reallocation of a sufficient quantity of existing and available water supply storage space in Broken Bow Lake to support a trout fishery. The Water Resources Development Act of 1999 allowed for a 3-foot seasonal pool to offset losses to hydropower caused by the trout fishery. Tulsa District received funds in FY 01 to initiate a reallocation study to determine the environmental, cultural and socio-economic impacts of these actions. Studies accomplished during FY 01 indicate that 107,000 acre-feet (123 mgd) will need to be reallocated to support the trout fishery. EA mitigation measures call for the removal of two low-water crossings on U.S. Forest Service (USFS) land. The USFS plans on removing the low-water crossings in August 2003 after completion of its NEPA process. Cultural resource studies are scheduled to be completed FY 03. Writing of the reallocation report was started in FY 03 and will be completed when the EA is complete. Work is on-going.

d. **Sardis Lake.** The water supply agreement between the United States and the Oklahoma Water Resources Board (OWRB) is in default and the Department of Justice filed a lawsuit in July 1998. The United States lawsuit was placed in administrative park until a "qui tam" lawsuit filed by a group of Oklahoma taxpayers (qui tam) is resolved. The U.S. was dismissed from the case and the case was appealed to the U.S. Court of Appeals for the 10<sup>th</sup> Circuit. The 10<sup>th</sup> Circuit upheld the dismissal of the U.S. from the lawsuit. The Oklahoma qui tam group submitted a writ of certiorari after all its appeals to the lower courts had been exhausted. The Oklahoma Supreme Court accepted to hear the case and the state of Oklahoma and the qui tam group filed briefs in October 2002. The Federal government's lawsuit is in administrative park until the qui tam lawsuit is resolved. There is no time schedule for the Oklahoma Supreme Court's decision. There has been no action on this project since the Water Resources Development Act of 1999 provided for a one-time discounted purchase price for the water supply storage and on which the state of Oklahoma did not act. Late interest is continuing to accrue on this project and the payout amount is now estimated to be in excess of \$60M. Work is on-going.

e. **Waurika Lake.** The Tulsa District did extensive cost accounting research on the water conveyance facilities at Waurika Lake. The Waurika Project Master Conservancy District

(WPMCD) is responsible for 100 percent reimbursement of the construction costs. Costs were finalized for the conveyance facilities when settlement was reached on an outstanding construction claim. The WPMCD questioned all costs included in the final cost accounting. When researching the costs, Tulsa District found that lands purchased specifically for the conveyance facilities had been inadvertently charged to the reservoir. All associated land costs, including supervision and administration were backed out of the reservoir accounts and applied to the appropriate conveyance facility. The WPMCD found legislative relief for the construction claim, final construction costs and the land costs. WRDA 99 waived the \$2.9M construction claim and \$595K, which represented one-half of the difference between the 1978 construction cost estimate and the actual construction costs determined after completion of the project. The WPMCD sought additional legislative relief in WRDA 2000 and WRDA 2002 but no language has passed to accommodate WPMCD's request for additional relief. The WPMCD continues to pay invoices based on estimated costs rather than adjusted costs. Tulsa District continues to work with WPMCD to resolve these issues.

f. **Lake Texoma.** Funds were received in FY 02 from the Ft. Worth District to begin a reallocation study on Lake Texoma. WRDA of 1986 allows the reallocation of an additional 300,000 acre-feet from hydropower to water supply. Due to the rapid growth and drought conditions that Texas has been experiencing, there has been a lot of interest by the North Texas area to have this reallocation accomplished. In FY 02 a sediment survey was completed; future sediment estimates were extrapolated; a new area-elevation-capacity table developed; and the H&H SUPER model was updated to include the latest period of record data. H&H runs will be done to determine effects on flow-duration and flood frequency if additional funds are received in FY 03, as well as NEPA documentation and impacts to hydropower.

g. **Wister Lake.** A reallocation study was initiated on Wister Lake to study the effects on flood control loss and the environment from the two legislative pool raises that have occurred at Wister Lake. The EA has identified extensive mitigation measures for loss of wildlife habitat. The cultural resource study has been delayed due to the Native American concerns that burial sites were lost because of the legislative pool raises that did not allow mitigation or removal prior to the pool raise. The EA was scheduled to be finalized FY 02; however, due to cultural issues the cultural field work is now scheduled for finalization in FY 03. The reallocation report is scheduled to be completed in FY 03.

h. **Hulah Lake.** Hulah Lake suffered a severe drought in FY 02 losing all but 17 percent of its conservation pool. Hulah Lake is the City of Bartlesville, Oklahoma's (Bartlesville) main water supply source. During the critical stage of the drought all downstream flows and withdrawals from the lake had to be discontinued. Bartlesville requested withdrawals from water quality releases being made from Copan Lake as a backup solution to no withdrawals from Hulah. This has prompted a congressional interest in performing a reallocation study at Hulah Lake to determine if there are other ways to provide additional water supply storage. This includes reallocating from the flood control pool, operating Hulah and Copan as a system, changing the operation of the lakes, etc. The reallocation study will commence when funds are received.

i. **Copan Lake.** Because of the severe drought at Hulah Lake in FY 2002, there is congressional

interest in performing a reallocation study at Copan Lake to see if additional storage can be reallocated at Copan Lake for the city of Bartlesville during times of drought. Copan Lake has water quality storage which might be reallocated to water supply. The study will commence upon receipt of funds.

j. **Hugo Lake.** Interest has resurfaced in raising Hugo Lake an additional 5 feet. Hugo Lake was authorized and designed to be raised in 5-foot increments as a part of a 3 reservoir system (Hugo, Sardis and Tuskahoma). Since Sardis Lake is the only project above Hugo that has been built, Hugo has the potential to be raised an additional 5 feet from elevation 404.5 to 409.5.

**Table 24**  
**Tulsa District**  
**Water Supply Allocations**  
**For Fiscal Years 2001 Through 2002**  
**(In Acre Feet)**

PROJECT NAME	AMOUNT OF STORAGE ALLOCATED	AMOUNT OF STORAGE CONTRACTED	NUMBER OF CONTRACTS (USERS)	AMOUNT SUPPLIED	
				(FY 01)	(FY 02)
<u>ARK RIVER BASIN</u>					
Arcadia	23,090	23,090	1	2,733	3239
Pearson-Skubitz Big Hill	25,700	25,700	1	1,038	975
Birch	7,630	0	0	0	0
Canton	90,000 (1)	90,000	1	0	0
Copan	7,500	5,000	1	114	98
Council Grove	32,400 (2)	32,400	2	0	0
El Dorado	142,800	142,800	1	10,909	9790
Elk City	20,180 (3)	24,300	2	0	0
Eufaula	56,000	13,033	26	3,942	4123
Fort Gibson	0	0	0	16,329	16150
Fort Supply	400	400	0	0	0
Heyburn	2,000 (4)	2,000	3	2,219	1932
Hulah	19,800	19,800	4	6,107	7299
John Redmond	37,450 (5)	44,900 (4)	2	33,040	41020
Kaw	17,1200	90,989	5 (6)	7,250	9569
Keystone	20,000	18,000	1	8,374	8129
Marion	44,730 (7)	50,800 (7)	2	838	1052
Oologah	342,600	327,005	9	82,690	74287
Optima	76,200	0	0	0	0
Skiatook	62,900	15,248	7 (6)	8,000	8366

**Table 24**  
**Tulsa District**  
**Water Supply Allocations**  
**For Fiscal Years 2001 Through 2002**  
**(In Acre Feet)**

PROJECT NAME	AMOUNT OF STORAGE ALLOCATED	AMOUNT OF STORAGE CONTRACTED	NUMBER OF CONTRACTS (USERS)	AMOUNT SUPPLIED	
				(FY 01)	(FY 02)
Tenkiller	25,400	17,964	30	6,022	5193
Toronto	400	400	2	0	298
Wister	14,000	13,653	3	11,686	11807
<b>RED RIVER BASIN</b>					
Broken Bow	152,500 (8)	8,355	2	4,151	3695
Hugo	47,600	45,402	4	6,598	9928
Pat Mayse	109,600	109,600	1	16,443	17153
Pine Creek	49,400	28,800	1	33,967	33967
Sardis	297,200	297,200	1	0	0
Texoma (10)	158,060 (9)	146,460	8	18,487	51907
Waurika	151,400	41,800	1	4,552	5138

(1) Based on 1977 sedimentation survey.

(2) Reallocation of 8,000 acre-feet of water quality storage to water supply storage 6/26/96.

(3) Based on 1992 sedimentation resurvey; estimated storage to be available in year 2016; reallocation (of 10,000 acre-feet water quality to water supply 6/26/96).

(4) Estimated storage to be available in year 2000.

(5) Based on 1993 sedimentation resurvey; estimated storage to be available in year 2014; reallocation of 10,000 acre-feet water quality storage to water supply 6/26/96.

(6) Total includes one contract for conduit only.

(7) Based on 1982 sedimentation resurvey; estimated storage to be available in year 2018; reallocation

of 12,500 acre-feet water quality storage to water supply on 6/26/96.

(8) An unspecified amount of water supply storage is to be reallocated to sustain the Oklahoma Department of Wildlife Conservation's trout fishery in accordance with WRDA of 1996; the storage

will be reduced when determined.

(9) Revision due to water supply yield study; based on 1985 sedimentation survey

(10) Joint water supply and power provided between elevations 617.0 - 590.0.

## **7. LAKE ATTENDANCE.**

Lake attendance figures (1000's visitor hours) for fiscal years 1998 through 2002 are tabulated in table 25.

**Table 25**  
**Tulsa District**  
**Annual Lake Attendance**  
**For Fiscal Years 1998 Through 2002**  
**(1000's Visitor Hours)**

LAKE PROJECT	1998	1999	2000	2001	2002
ARCADIA LAKE	2,206	2,201	6,790	7,463	6,568
BIRCH LAKE	1,198	1,193	1,024	1,719	1,590
BROKEN BOW LAKE	15,271	18,354	21,116	26,784	24,798
CANTON LAKE	11,815	12,533	11,759	11,479	12,922
CHOUTEAU LOCK & DAM 17	1,432	1,370	1,109	1,134	1,219
COPAN LAKE	383	233	268	183	207
COUNCIL GROVE	1,712	1,816	1,732	1,999	1,902
EL DORADO LAKE	6,808	6,813	7,433	6,861	6,511
ELK CITY LAKE	1,649	1,453	1,267	1,619	1,357
EUFAULA LAKE	31,595	30,832	27,270	26,239	26,979
FALL RIVER LAKE	1,349	1,414	1,582	1,504	1,376
FORT GIBSON LAKE	35,038	31,203	33,163	34,059	29,733
FORT SUPPLY LAKE	5,287	4,842	4,973	5,680	4,127
GREAT SALT PLAINS	1,465	1,552	1,379	1,624	1,358
HEYBURN LAKE	1,100	1,094	851	830	1,219
HUGO LAKE	1,900	2,259	2,306	3,165	3,374
HULAH LAKE	516	463	399	430	293
JOHN REDMOND RESERVOIR	883	2,044	967	2,608	924
KAW LAKE	5,591	1,703	4,850	4,246	5,997
KEYSTONE LAKE	9,241	9,158	8,192	8,250	5,604
MARION RESERVOIR	7,361	7,815	5,935	7,037	9,281
NEWT GRAHAM LOCK & DAM 18	1,212	1,010	1,037	983	1,242
OOLOGAH LAKE	13,837	13,244	12,294	12,443	11,232
OPTIMA LAKE	102	101	62	29	37
PAT MAYSE LAKE	1,248	1,322	1,258	1,246	1,438
PEARSON-SKUBITZ BIG HILL LAKE	1,145	1,184	1,146	1,241	1,068
PINE CREEK LAKE	3,817	4,886	5,409	9,675	8,213
ROBERT S. KERR, LOCK & DAM 15	3,362	3,549	3,960	3,580	3,878
SARDIS LAKE	2,477	2,357	2,340	2,124	2,750
SKIATOOK LAKE	4,573	4,749	5,079	5,928	7,252
TENKILLER FERRY LAKE	21,533	19,354	26,499	31,719	32,784
TEXOMA LAKE	80,541	90,096	87,294	106,795	90,457
TORONTO LAKE	2,145	2,270	1,852	2,778	2,985
WAURIKA LAKE	2,077	2,158	2,149	2,593	2,206
WD MAYO LOCK & DAM 14	275	256	6,259	233	264
WEBBERS FALLS LOCK & DAM 16	8,500	7,458	6,929	5,861	7,498
WISTER LAKE	2,460	3,866	3,392	3,659	3,595
<b>Total</b>	<b>294,027</b>	<b>298,204</b>	<b>305,326</b>	<b>345,801</b>	<b>324,253</b>

## **8. COOPERATIVE PROGRAMS.**

- a. National Weather Service.** Real-time water control, investigation and design of our water resources projects require the measurement and reporting of rainfall and evaporation

data. These data are provided through a cooperative program with the National Weather Service. During FY 02, the rainfall program in the Tulsa District cost \$109,844 through transfer of funds to the National Weather Service.

- b. U.S. Geological Survey.** Much of the information required for water control, hydrologic investigation, and design of water resources projects results from the reporting and measurement of flow, water quality, and sediment provided by a cooperative program with the USGS. During FY 02, this cooperative program included 83 stations. There were 101 surface water gages and 3 water quality stations operated independently by the Corps of Engineers. In FY 02, Tulsa District transferred \$413,536 to the USGS for operation of stations and data publications. The total CE/USGS program cost for FY 2003 will be \$411,536.

- 9. SEDIMENT ACTIVITIES.** During FY2002, a complete resurvey of Lake Texoma was done under contract by the Texas Water Development Board (TWDB). Elevation-Area-Capacity data has been furnished and a complete report will be available in November 2002. Complete hydrographic surveys of the normal pools of Copan and Hulah Lakes were also done by the TWDB. Results of these surveys are pending. No suspended sediment samples were collected by Tulsa District this FY and no sampling is anticipated during FY 2003.

## **10. WATER CONTROL STAFFING.**

**Table 26  
Tulsa District  
Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone #.</b>	<b>Grade</b>
Ron Bell	CESWT-EC-HM	Chief, Water Management	918-669-7093	GS-13
John Clark	CESWT-EC-HM	Reservoir Operations	918-669-7097	GS-12
Don Butler	CESWT-EC-HM	Reservoir Operations	918-669-7102	GS-12
Greg Estep	CESWT-EC-HM	Reservoir Operations	918-669-7132	GS-12
Jim Croston	CESWT-EC-HM	Reservoir Operations	918-669-7103	GS-12
Bill Chatron	CESWT-EC-HM	Reservoir Operations	918-669-7094	GS-12
Dallas Tomlinson	CESWT-EC-HM	Reservoir Operations	918-669-7093	GS-12
Kelita Stephens	CESWT-EC-HM	Reservoir Operations	918-669-7002	GS-12
Dave Urbon	CESWT-EC-HF	Chief, Forecasting/CP	918-669-7537	GS-13
John Daylor	CESWT-EC-HF	Forecasting	918-669-7099	GS-12
Mary Ann Duke	CESWT-EC-HF	Forecasting	918-669-7100	GS-12
Dan Hernandez	CESWT-EC-HF	Computer Processing	918-669-7506	GS-12
Andrew Miller	CESWT-EC-HF	Computer Processing	918-669-7276	GS-12
Lisa Samilton	CESWT-EC-HF	Computer Processing	918-669-7537	GS-12
Calvin Hall	CESWT-EC-HF	Computer Technician	918-669-7141	GS-9
* Ted Holsomback	CESWT-EC-HA	Chief, H&H Sec.	918-669-7493	GS-13
Ray Bames	CESWT-EC-HA	Instrumentation	918-669-7108	GS-12
Paul Bisdorf	CESWT-EC-HA	Instrument Technician	918-669-7504	GS-9



**Table 26**  
**Tulsa District**  
**Water Control Staff**

<b>Name</b>	<b>Org. Code</b>	<b>Position</b>	<b>Phone #.</b>	<b>Grade</b>
Deb Oswalt	CESWT-EC-HA	Instrument Technician	918-669-7502	GS-11
Dion Burleson	CESWT-EC-HA	Instrument Technician	918-669-7503	GS-11
Randy Moe	CESWT-EC-HA	Instrument Technician	918-669-4945	GS-9
Billy Pitts	CESWT-EC-HA	Instrument Technician	918-669-7298	GS-7
* Jim Leach	CESWT-EC-HA	Backup Forecaster	918-669-7091	GS-12
* Russ Wyckoff	CESWT-EC-HA	Backup Forecaster	918-669-7107	GS-12
* Karol Rutz	CESWT-EC-HA	Backup Forecaster	918-669-7353	GS-12
* Scott Henderson	CESWT-EC-HA	Backup Forecaster	918-669-7509	GS-12
* Sara Harris	CESWT-EC-HA	Backup Forecaster	918-669-4354	GS-11
<ul style="list-style-type: none"> <li>*Personnel whose main assignments are H&amp;H studies not water control</li> </ul>				

**SECTION X**  
**RESERVOIR DATA SUMMARY**

# SECTION X - RESERVOIR DATA SUMMARY

**Table 27**  
**Lake Summary Index**  
**By Watershed**

LAKE NAME	STREAM	DIST	STATE	YR COMP	POOL CON	ELEV FC	CAPACITY** (1,000 AF)		PAGE NO
							CON	FC	
White River Basin									
Beaver Lake	White	LRD	AR	66	1120	1130	1652	300	X-33
Table Rock Lake	White	LRD	AR/MO	58	915	931	2702	760	X-33
Bull Shoals Lake	White	LRD	AR/MO	52	654	695	3048	2360	X-34
Norfork Lake	North Fork	LRD	AR/MO	45	552	580	1251	732	X-34
Clearwater Lake	Black	LRD	MO	48	494	567	22	391	X-35
Greers Ferry Lake	Little Red	LRD	AR	62	461	487	1119	934	X-35
Arkansas River Basin									
Cheney Reservoir	N. Fork Ninnescah	TD*	KS	64	1421.6	1429	167	81	X- 10
El Dorado Lake	Walnut River	TD	KS	80	1339	1347.5	157	79	X- 13
Kaw Lake	Arkansas River	TD	OK/KS	76	1010	1044.5	429	919	X- 17
Great Salt Plains	Salt Fork Arkansas	TD	OK	41	1125	1138.5	31	240	X- 15
Keystone Lake	Arkansas River	TD	OK	64	723	754	618	1219	X- 18
Heyburn Lake	Polecat Creek	TD	OK	50	761.5	784	7	48	X- 16
Toronto Lake	Verdigris River	TD	KS	60	901.5	931	22	178	X- 22
Fall River Lake	Fall River	TD	KS	49	948.5	987.5	24	235	X- 14
Elk City Lake	Elk River	TD	KS	66	792	825	34	256	X- 12
Big Hill Lake	Big Hill Creek	TD	KS	81	858	867.5	27	13	X-9
Oologah Lake	Verdigris River	TD	OK	63	638	661	553	966	X-20
Hulah Lake	Caney River	TD	OK/KS	51	733	765	36	258	X-16
Copan Lake	L Caney	TD	OK/KS	80	710	732	43	184	X-12
Birch Lake	Birch Creek	TD	OK	79	750.5	774	19	39	X-10
Skiatook Lake	Hominy Creek	TD	OK	82	714	729	305	182	X-21
Newt Graham (L&D 18)	Verdigris River	TD	OK	70	532	0	24	0	X-23
Chouteau (L&D 17)	Verdigris River	TD	OK	70	511	0	23	0	X-25
Council Grove Lake	Neosho River	TD	KS	65	1270	1289	38	76	X-11
Marion Lake	Cottonwood River	TD	KS	68	1350.5	1358.5	86	60	X-19
John Redmond Dam	Neosho River	TD	KS	64	1039	1068	82	563	X-17
Pensacola Lake (Grand Lake)	Neosho (Grand)	TD*	OK	40	745	755	1672	525	X-21
Lake Hudson	Neosho (Grand)	TD*	OK	64	619	636	200	244	X-18
Fort Gibson Lake	Neosho (Grand)	TD	OK	52	544	582	365	919	X-15
Webbers Falls (L&D 16)	Arkansas River	TD	OK	70	490	0	165	0	X-25

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 27**  
**Lake Summary Index**  
**By Watershed**

LAKE NAME	STREAM	DIST	STATE	YR COMP	POOL CON	ELEV FC	CAPACITY** (1,000 AF)		PAGE NO
							CON	FC	
Tenkiller Ferry Lake	Illinois River	TD	OK	52	632	667	654	577	X-22
Lake Meredith (Sanford )	Canadian River	TD*	TX	65	2941.3	2965	945	463	X-19
Lake Thunderbird (Norman)	Little River	TD*	OK	65	1039	1049.4	120	77	X-20
Optima	N Canadian River	TD	OK	78	2763.5	2779	129	101	***
Fort Supply Lake	Wolf Creek	TD	OK	42	2004	2028	14	87	X-14
Canton Lake	N Canadian River	TD	OK	48	1615.2	1638	116	268	X-11
Arcadia Lake	Arkansas River	TD	OK	86	1006	1029.5	28	65	X-9
Eufaula Lake	Canadian River	TD	OK	64	585	597	2329	1470	X-13
Robert S. Kerr (L&D 15)	Arkansas River	TD	OK	70	460	0	494	0	X-24
W D Mayo (L&D 14)	Arkansas River	TD	OK	70	413	0	16	0	X-24
Wister Lake	Poteau River	TD	OK	49	471.6	502.5	27	400	X-23
James W Trimble (L&D 13)	Arkansas River	LRD	AR/OK	69	392	0	54	0	X-36
Ozark-Jetta Taylor (L&D 12)	Arkansas River	LRD	AR	69	372	0	148	0	X-36
Dardanelle (L&D 10)	Arkansas River	LRD	AR	64	338	0	486	0	X-37
Blue Mountain Lake	Petit Jean	LRD	AR	47	384	419	25	233	X-37
Arthur V Ormond (L&D 9)	Arkansas River	LRD	AR	69	287	0	65	0	X-38
Toad Suck Ferry (L&D 8)	Arkansas River	LRD	AR	69	265	0	35	0	X-38
Nimrod Lake	Fourche La Fave	LRD	AR	42	342	373	29	307	X-39
Murray (L&D 7)	Arkansas River	LRD	AR	69	249	0	87	0	X-39
David D. Terry (L&D 6)	Arkansas River	LRD	AR	68	231	0	50	0	X-40
Lock And Dam No. 5	Arkansas River	LRD	AR	68	213	0	65	0	X-40
Emmett Sanders (L&D 4)	Arkansas River	LRD	AR	68	196	0	70	0	X-41
Lock And Dam No. 3	Arkansas River	LRD	AR	68	182	0	46	0	X-41
Wilbur D Mills (L&D 2)	Arkansas River	LRD	AR	67	162	0	110	0	X-42
Red River Basin									
Altus Reservoir	N. Fork Red River	TD*	OK	46	1559	1562	141	21	X-26
Tom Steed Reservoir (Mountain Park)	W Otter Creek	TD*	OK	75	1411	1414	96	20	X-30
Lake Kemp	Wichita River	TD*	TX	77	1144	1156	299	225	X-32
Waurika Lake	Beaver Creek	TD	OK	78	951.4	962.5	203	140	X-32
Foss Reservoir	Washita River	TD*	OK	61	1562	1668.6	256	181	X-28
Fort Cobb	Cobb Creek	TD*	OK	59	1342	1354.8	78	64	X-29
Arbuckle Reservoir	Rock Creek	TD*	OK	67	872	885.3	72	36	X-26
Denison Dam (Lake Texoma)	Red River	TD	TX/OK	45	617.3	640	2836	2660	X-28
McGee Creek	McGee Creek	TD*	OK	87	577	595.5	113	199	X-30
Pat Mayse Lake	Sanders Creek	TD	TX	68	451	460.5	124	65	X-31
Sardis Lake	Jack Fork Creek	TD	OK	84	599	607	302	128	X-27

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 27**  
**Lake Summary Index**  
**By Watershed**

LAKE NAME	STREAM	DIST	STATE	YR COMP	POOL CON	ELEV FC	CAPACITY** (1,000 AF)		PAGE NO
							CON	FC	
Hugo Lake	Kiamichi River	TD	OK	74	404.5	437.5	157	809	X-29
Pine Creek Lake	Little River	TD	OK	69	443.5	480	78	388	X-31
Broken Bow Lake	Mountain Fork	TD	OK	69	599.5	627.5	919	450	X-27
Dequeen Lake	Rolling Fork	LRD	AR	77	437	473.5	35	101	X-43
Gillham Lake	Cossatot	LRD	AR	76	502	569	33	189	X-43
Dierks Lake	Saline River	LRD	AR	76	526	557.5	30	67	X-44
Millwood Lake	Little River	LRD	AR	66	259.2	287	207	1653	X-44
Cooper Dam (Jim Chapman Lake)	Sulphur River	FWD	TX	92	440	446.2	273	130	X-45
Wright Patman Lake	Sulphur River	FWD	TX	56	220	259.5	143	2509	X-45
Lake O' The Pines	Cypress Creek	FWD	TX	60	228.5	249.5	251	580	X-46
Neches River Basin									
Sam Rayburn	Angelina River	FWD	TX	65	164.4	173	2898	1009	X-46
B. A. Steinhagen	Neches River	FWD	TX	51	81	83	70	24	X-47
Trinity River Basin									
Benbrook Lake	Clear Fork	FWD	TX	52	694	724	88	170	X-47
Joe Pool Lake	Mt. Creek	FWD	TX	86	522	536	143	123	X-48
Lake Ray Roberts	Elm Fork	FWD	TX	87	632.5	640.5	749	260	X-48
Lewisville Lake	Elm Fork	FWD	TX	54	515	532	465	525	X-49
Grapevine Lake	Denton Creek	FWD	TX	52	535	560	189	248	X-49
Lavon Lake	East Fork	FWD	TX	77	492	503.5	457	277	X-50
Navarro Mills Lake	Richland Creek	FWD	TX	68	424.5	443	63	149	X-50
Bardwell Lake	Waxahachie Creek	FWD	TX	65	421	439	55	85	X-51
San Jacinto River Basin									
Barker Reservoir	Buffalo Bayou	GD	TX	45	0	107	0	207	X-59
Addicks Reservoir	Buffalo Bayou	GD	TX	48	0	114	0	205	X-59
Brazos River Basin									
Whitney Lake	Brazos	FWD	TX	51	533	571	627	1372	X-51
Aquilla Lake	Aquilla	FWD	TX	83	537.5	556	34	87	X-52
Waco Lake	Bosque	FWD	TX	65	455	500	153	574	X-52
Proctor Lake	Leon River	FWD	TX	63	1162	1197	59	315	X-53
Belton Lake	Leon River	FWD	TX	54	594	631	458	640	X-53
Stillhouse Hollow	Lampasas River	FWD	TX	68	622	666	236	395	X-54
Georgetown Lake	N Fork San Gabriel	FWD	TX	79	791	834	37	93	X-54
Granger Lake	San Gabriel River	FWD	TX	79	504	524	66	179	X-55
Somerville Lake	Yegua Creek	FWD	TX	67	238	258	160	347	X-55
Colorado River Basin									

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 27**  
**Lake Summary Index**  
**By Watershed**

LAKE NAME	STREAM	DIST	STATE	YR COMP	POOL CON	ELEV FC	CAPACITY** (1,000 AF)		PAGE NO
							CON	FC	
Twin Buttes Lake	S&M Concho River	FWD*	TX	63	1940.2	1969.1	186	454	X-56
O. C. Fisher Lake	N Concho River	FWD	TX	52	1908	1938.5	119	277	X-56
Hords Creek Lake	Hords Creek	FWD	TX		1900	1920	9	17	X-57
Marshall Ford Lake	Colorado River	FWD*	TX	40	81	714	1172	780	X-57
Guadalupe River Basin									
Canyon Lake	Guadalupe River	FWD	TX	64	909	943	386	355	X-58

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 28**  
**Lake Summary Index**  
**Alphabetically**

<b>Project Name</b>	<b>River Basin</b>	<b>Page Number</b>
Addicks Reservoir	San Jacinto River	X-59
Altus Reservoir	Red River	X-26
Aquilla Lake	Brazos River	X-52
Arbuckle Reservoir	Red River	X-26
Arcadia Lake	Arkansas River	X-9
Arthur V. Ormond (L&D 9)	Arkansas River	X-38
B. A. Steinhagen	Neches River	X-47
Bardwell Lake	Trinity River	X-51
Barker Reservoir	San Jacinto River	X-59
Beaver Lake	White River	X-33
Belton Lake	Brazos River	X-53
Benbrook Lake	Trinity River	X-47
Big Hill Lake	Arkansas River	X-9
Birch Lake	Arkansas River	X-10
Blue Mountain Lake	Arkansas River	X-37
Broken Bow Lake	Red River	X-27
Bull Shoals Lake	White River	X-34
Canton Lake	Arkansas River	X-11
Canyon Lake	Guadalupe River	X-58
Cheney Reservoir	Arkansas River	X-10
Chouteau (L&D 17)	Arkansas River	X-25
Clearwater Lake	White River	X-35
Cooper Dam (Jim Chapman Lake)	Red River	X-45
Copan Lake	Arkansas River	X-12
Council Grove Lake	Arkansas River	X-11
Dardanelle (L&D 10)	Arkansas River	X-37
David D. Terry (L&D 6)	Arkansas River	X-40
Denison Dam (Lake Texoma)	Red River	X-28
DeQueen Lake	Red River	X-43
Dierks Lake	Red River	X-44
El Dorado Lake	Arkansas River	X-13
Elk City Lake	Arkansas River	X-12

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 28**  
**Lake Summary Index**  
**Alphabetically**

<b>Project Name</b>	<b>River Basin</b>	<b>Page Number</b>
Emmett Sanders (L&D 4)	Arkansas River	X-41
Eufaula Lake	Arkansas River	X-13
Fall River Lake	Arkansas River	X-14
Fort Cobb	Red River	X-29
Fort Gibson Lake	Arkansas River	X-15
Fort Supply Lake	Arkansas River	X-14
Foss Reservoir	Red River	X-28
Georgetown Lake	Brazos River	X-54
Gillham Lake	Red River	X-43
Granger Lake	Brazos River	X-55
Grapevine Lake	Trinity River	X-49
Great Salt Plains	Arkansas River	X-15
Greers Ferry Lake	White River	X-35
Heyburn Lake	Arkansas River	X-16
Hords Creek Lake	Colorado River	X-57
Hugo Lake	Red River	X-29
Hulah Lake	Arkansas River	X-16
James W. Trimble (L&D 13)	Arkansas River	X-36
Joe Pool Lake	Trinity River	X-48
John Redmond Dam	Arkansas River	X-17
Kaw Lake	Arkansas River	X-17
Keystone Lake	Arkansas River	X-18
Lake Hudson	Arkansas River	X-18
Lake Kemp	Red River	X-32
Lake Meredith (Sanford)	Arkansas River	X-19
Lake O' The Pines	Red River	X-46
Lake Ray Roberts	Trinity River	X-48
Lake Sam Rayburn	Neches River	X-46
Lake Thunderbird (Norman)	Arkansas River	X-20

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions



**Table 28**  
**Lake Summary Index**  
**Alphabetically**

<b>Project Name</b>	<b>River Basin</b>	<b>Page Number</b>
Lavon Lake	Trinity River	X-50
Lewisville Lake	Trinity River	X-49
Lock & Dam No. 3	Arkansas River	X-41
Lock & Dam No. 5	Arkansas River	X-40
Marion Lake	Arkansas River	X-19
Marshall Ford Lake	Colorado River	X-57
McGee Creek	Red River	X-30
Millwood Lake	Red River	X-44
Murray (L&D 7)	Arkansas River	X-39
Navarro Mills Lake	Trinity River	X-50
Newt Graham (L&D 18)	Arkansas River	X-23
Nimrod Lake	Arkansas River	X-39
Norfork Lake	White River	X-34
O. C. Fisher Lake	Colorado River	X-56
Oologah Lake	Arkansas River	X-20
Optima Lake	Arkansas River	***
Ozark-Jetta Taylor (L&D 12)	Arkansas River	X-36
Pat Mayse Lake	Red River	X-31
Pensacola Lake(Grand Lake)	Arkansas River	X-21
Pine Creek Lake	Red River	X-31
Proctor Lake	Brazos River	X-53
Robert S. Kerr (L&D 15)	Arkansas River	X-24
Sardis Lake	Red River	X-27
Skiatook Lake	Arkansas River	X-21
Somerville Lake	Brazos River	X-55
Stillhouse Hollow	Brazos River	X-54
Table Rock Lake	White River	X-33
Tenkiller Ferry Lake	Arkansas River	X-22
Toad Suck Ferry (L&D 8)	Arkansas River	X-38

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

**Table 28**  
**Lake Summary Index**  
**Alphabetically**

<b>Project Name</b>	<b>River Basin</b>	<b>Page Number</b>
Tom Steed Reservoir (Mountain Park)	Red River	X-30
Toronto Lake	Arkansas River	X-22
Twin Buttes Lake	Colorado River	X-56
W D Mayo (L&D 14)	Arkansas River	X-24
Waco Lake	Brazos River	X-52
Waurika Lake	Red River	X-32
Webbers Falls (L&D 16)	Arkansas River	X-25
Whitney Lake	Brazos River	X-51
Wilbur D. Mills (L&D 2)	Arkansas River	X-42
Wister Lake	Arkansas River	X-23
Wright Patman Lake	Red River	X-45

\* Section 7 Flood Control Projects

\*\* Includes dead storage, conservation, water supply, power, irrigation, etc.

\*\*\* Records not maintained due to low flow conditions

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
ARKANSAS RIVER BASIN

ARCADIA LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1939 THRU 2002	3.00	2.24	1.76	1.79	1.99	3.29	4.16	7.96	5.85	2.53	1.74	2.93	39.2
FY 2002	1.43	0.00	0.00	3.99	0.73	1.98	5.57	2.16	2.51	2.88	2.87	2.76	26.88
<u>RELEASES(1000AC.FT.)</u>													
AVG 1989 THRU 2002	1.56	3.16	2.16	2.32	1.70	3.01	3.48	7.42	7.05	4.32	2.36	3.98	42.5
FY 2002	0.48	0.00	0.29	0.00	2.85	0.57	3.96	1.18	1.37	0.70	0.60	1.33	13.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.63	2.04	1.47	1.20	1.52	2.37	3.19	5.22	4.32	2.67	2.62	3.54	32.79
FY 2002	1.17	1.15	0.91	2.43	0.72	1.41	4.08	1.72	2.91	2.96	3.27	2.84	25.57
DEVIATION	-1.46	-0.89	-0.56	1.23	-0.80	-0.96	0.89	-3.50	-1.41	0.29	0.65	-0.70	-7.22
<u>POOL ELEVATION</u>													
END OF MONTH	1006.02	1006.10	1006.02	1007.63	1006.00	1006.12	1006.33	1006.16	1005.82	1005.94	1006.11	1006.09	
MAXIMUM	1006.56	1006.21	1006.33	1007.63	1007.64	1006.59	1007.75	1006.85	1006.88	1006.70	1006.72	1006.78	
MINIMUM	1006.00	1005.96	1006.01	1005.94	1006.00	1005.98	1006.07	1006.05	1005.82	1005.74	1005.58	1005.90	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	27.61	27.76	27.61	30.64	27.57	27.79	28.18	27.87	27.25	27.46	27.78	27.74	
BIG HILL LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1929 THRU 2002	1.69	1.41	0.83	0.97	1.01	2.04	2.49	3.36	3.31	1.51	0.42	1.31	20.3
FY 2002	0.55	0.00	0.00	0.62	0.36	0.16	1.35	12.40	1.94	0.47	0.14	0.30	18.28
<u>RELEASES(1000AC.FT.)</u>													
AVG 1984 THRU 2002	1.91	1.62	0.98	0.97	1.46	2.99	2.31	3.59	2.71	1.02	0.74	0.76	21.1
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.06	11.37	2.13	0.01	0.00	0.00	13.6
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.18	2.51	1.48	1.29	1.32	2.54	3.69	5.04	5.21	3.69	3.35	4.47	37.74
FY 2002	4.27	1.78	0.96	1.73	0.30	0.37	4.04	9.36	3.72	3.51	1.60	3.20	34.84
DEVIATION	1.09	-0.73	-0.52	0.44	-1.02	-2.17	0.35	4.32	-1.49	-0.18	-1.75	-1.27	-2.90
<u>POOL ELEVATION</u>													
END OF MONTH	856.60	857.19	857.06	857.55	857.55	857.43	858.15	858.67	857.98	857.76	857.23	856.88	
MAXIMUM	857.01	857.57	857.19	857.55	857.92	857.69	858.20	861.70	858.91	858.05	857.76	857.23	
MINIMUM	856.53	856.60	856.98	856.81	857.54	857.39	857.34	858.02	857.96	857.60	857.11	856.77	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	25.33	26.01	25.86	26.44	26.44	26.30	27.15	27.78	26.94	26.69	26.06	25.65	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
ARKANSAS RIVER BASIN

BIRCH LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1938 THRU 2002	2.08	1.69	1.38	1.17	1.56	3.51	4.17	6.03	3.91	1.51	0.80	1.66	29.5
FY 2002	0.13	0.00	0.00	1.73	0.47	0.32	5.31	6.04	3.17	0.08	0.47	0.14	17.86
<u>RELEASES(1000AC.FT.)</u>													
AVG 1979 THRU 2002	2.39	1.59	1.56	1.41	2.04	5.14	3.57	6.76	4.93	2.05	0.81	0.66	32.9
FY 2002	0.40	0.08	0.08	0.08	0.07	0.08	0.20	6.22	3.38	0.51	0.49	0.46	12.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.78	2.33	1.50	1.26	1.44	2.47	3.39	4.81	4.60	3.03	3.05	4.13	34.78
FY 2002	2.04	3.60	1.19	3.01	0.71	1.37	5.23	7.08	4.40	1.84	5.12	3.44	39.03
DEVIATION	-0.74	1.27	-0.31	1.75	-0.73	-1.10	1.84	2.27	-0.20	-1.19	2.07	-0.69	4.25
<u>POOL ELEVATION</u>													
END OF MONTH	745.24	745.80	745.65	747.12	747.25	747.29	751.56	751.04	750.30	749.35	748.76	747.82	
MAXIMUM	746.27	746.12	745.81	747.12	747.40	747.34	751.66	752.61	752.11	750.30	749.35	748.76	
MINIMUM	745.12	745.08	745.65	745.42	747.12	747.18	747.18	750.54	750.30	749.25	748.49	747.78	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	13.72	14.25	14.11	15.56	15.70	15.74	20.46	19.84	19.00	17.93	17.29	16.29	
CHENEY RESERVOIR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1950 THRU 2002	11.28	7.70	6.86	7.07	9.01	16.64	14.88	19.75	17.28	10.48	5.55	8.73	135.2
FY 2002	2.38	0.00	0.00	4.56	5.38	5.50	8.94	12.51	26.98	4.13	13.19	1.62	85.19
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	5.44	7.68	3.51	4.18	5.75	9.77	14.11	12.30	14.03	8.32	2.04	2.57	89.7
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.01	1.28	0.81	0.62	0.96	1.73	2.20	3.70	3.82	3.01	3.15	2.67	25.97
FY 2002	0.51	0.10	0.09	0.21	1.35	0.35	2.27	3.09	4.64	1.42	4.87	1.23	20.13
DEVIATION	-1.50	-1.18	-0.72	-0.41	0.39	-1.38	0.07	-0.61	0.82	-1.59	1.72	-1.44	-5.84
<u>POOL ELEVATION</u>													
END OF MONTH	1418.39	1418.10	1417.97	1418.07	1418.30	1418.43	1418.74	1419.27	1421.12	1420.20	1420.45	1419.62	
MAXIMUM	1418.98	1418.39	1418.26	1418.10	1418.46	1418.63	1418.86	1419.32	1421.35	1421.15	1420.67	1420.45	
MINIMUM	1418.33	1418.05	1417.96	1417.91	1418.02	1418.28	1418.30	1418.60	1419.06	1420.20	1419.78	1419.62	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	138.26	135.81	134.72	135.55	137.50	138.60	141.22	145.80	162.51	154.05	156.34	148.88	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
ARKANSAS RIVER BASIN

COUNCIL GROVE LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	5.94	4.94	3.31	2.79	4.54	8.26	12.12	16.19	15.72	11.71	4.75	6.75	97.0
FY 2002	0.66	0.00	0.00	1.43	0.83	1.16	3.23	2.79	1.47	0.40	0.99	1.09	14.04
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	4.90	5.80	4.18	2.41	3.52	8.40	11.76	16.12	15.39	10.43	5.42	2.22	90.5
FY 2002	1.26	1.22	1.25	1.25	0.87	0.89	0.83	0.33	0.34	1.28	2.12	1.92	13.6
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.37	1.64	1.07	0.79	0.84	1.95	2.97	4.46	4.68	3.85	3.53	3.49	31.65
FY 2002	1.75	0.26	0.21	0.59	0.71	0.47	3.56	3.93	1.97	0.91	3.10	1.73	19.19
DEVIATION	-0.62	-1.38	-0.86	-0.20	-0.13	-1.48	0.59	-0.53	-2.71	-2.94	-0.43	-1.76	-12.46
<u>POOL ELEVATION</u>													
END OF MONTH	1270.85	1270.45	1270.11	1270.04	1269.88	1269.76	1270.31	1270.83	1270.76	1269.94	1269.11	1268.43	
MAXIMUM	1271.32	1270.85	1270.46	1270.11	1270.19	1270.19	1270.33	1270.84	1270.95	1270.76	1269.94	1269.11	
MINIMUM	1270.81	1270.45	1270.11	1269.91	1269.88	1269.75	1269.62	1270.29	1270.74	1269.94	1269.11	1268.43	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	38.87	37.73	36.76	36.56	36.12	35.79	37.33	38.82	38.62	36.28	34.00	32.21	

CANTON LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	15.48	6.65	4.90	5.34	6.87	10.73	14.34	31.89	32.34	13.79	8.75	9.98	161.0
FY 2002	2.64	0.00	0.00	6.94	8.87	10.12	21.82	9.52	4.56	1.76	2.37	0.24	68.84
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	4.63	5.13	5.97	5.80	6.52	8.49	13.14	11.48	16.17	8.47	6.07	6.82	98.7
FY 2002	3.16	3.75	0.02	1.81	3.08	4.24	3.00	2.98	12.37	0.48	0.58	0.71	36.2
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	1.40	0.92	0.61	0.50	0.68	1.17	1.59	3.17	2.79	2.49	2.41	1.84	19.56
FY 2002	0.10	0.75	0.09	0.26	0.77	0.12	1.17	1.79	2.28	2.31	3.74	1.44	14.82
DEVIATION	-1.30	-0.17	-0.52	-0.24	0.09	-1.05	-0.42	-1.38	-0.51	-0.18	1.33	-0.40	-4.74
<u>POOL ELEVATION</u>													
END OF MONTH	1610.89	1611.13	1611.41	1612.00	1612.62	1613.17	1615.35	1615.80	1614.30	1613.94	1613.67	1613.08	
MAXIMUM	1611.31	1611.18	1611.44	1612.03	1612.69	1613.17	1615.35	1616.04	1615.80	1614.33	1613.94	1613.67	
MINIMUM	1610.89	1610.89	1611.13	1611.40	1612.00	1612.62	1613.13	1615.33	1614.06	1613.94	1613.61	1613.08	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	78.63	80.23	82.12	86.12	90.49	94.43	110.96	114.53	102.83	100.09	98.11	93.76	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

<u>COPAN LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1936 THRU 2002	18.20	16.09	10.85	9.38	13.67	29.37	33.23	43.20	36.08	16.10	3.69	10.09	239.9
FY 2002	0.60	0.00	0.00	1.43	0.76	0.19	0.33	88.32	35.38	2.88	0.98	2.87	133.74
<u>RELEASES(1000AC.FT.)</u>													
AVG 1984 THRU 2002	31.22	19.16	20.96	17.18	15.01	47.98	43.46	49.14	52.97	33.06	3.92	3.29	337.3
FY 2002	0.30	0.29	0.30	0.30	0.27	0.30	0.42	55.06	51.93	4.46	0.51	0.34	114.5
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.01	2.32	1.39	1.16	1.27	2.43	3.38	4.79	4.70	3.19	2.94	3.79	34.36
FY 2002	1.48	0.51	0.78	0.98	0.91	0.34	3.82	8.32	4.63	3.57	1.49	4.35	31.18
DEVIATION	-1.53	-1.81	-0.61	-0.18	-0.36	-2.09	0.44	3.53	-0.07	0.38	-1.45	0.56	-3.18
<u>POOL ELEVATION</u>													
END OF MONTH	707.80	707.55	707.38	707.51	707.43	707.18	707.74	714.38	710.80	710.02	709.62	709.86	
MAXIMUM	708.33	707.90	707.58	707.52	707.61	707.50	707.74	715.48	715.37	710.80	710.03	710.06	
MINIMUM	707.77	707.49	707.35	707.17	707.34	707.16	706.99	707.48	710.80	709.79	709.54	709.21	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	33.48	32.45	31.75	32.28	31.95	30.92	27.86	59.51	40.44	36.83	35.20	36.17	

<u>ELK CITY LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	22.14	21.35	12.52	10.90	14.92	31.32	43.77	46.14	46.19	19.09	5.98	14.84	289.2
FY 2002	1.33	0.00	0.00	1.08	0.37	0.76	6.97	165.34	48.11	4.11	1.18	2.78	232.02
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	26.19	21.91	17.01	19.86	18.56	43.64	35.60	41.81	55.16	38.03	8.35	5.32	331.4
FY 2002	0.98	0.88	0.53	0.44	2.86	0.43	0.42	81.63	122.67	3.34	0.33	1.93	216.4
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.77	2.25	1.33	1.06	1.17	2.27	3.31	4.60	4.89	3.40	3.07	4.02	34.14
FY 2002	1.41	1.19	0.53	1.01	1.54	0.29	3.32	9.09	4.23	2.89	3.11	3.61	32.22
DEVIATION	-1.36	-1.06	-0.80	-0.05	0.37	-1.98	0.01	4.49	-0.66	-0.51	0.04	-0.41	-1.92
<u>POOL ELEVATION</u>													
END OF MONTH	793.31	793.03	792.90	793.01	792.05	791.90	793.44	808.49	794.54	794.18	793.89	793.66	
MAXIMUM	793.65	793.32	793.07	793.01	793.08	792.12	793.44	809.65	808.49	794.54	794.18	793.91	
MINIMUM	793.26	793.03	792.90	792.78	792.00	791.90	791.80	793.44	794.54	794.01	793.89	793.48	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	33.26	32.23	31.77	32.16	28.77	28.27	33.74	115.52	37.82	36.47	35.39	34.54	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

EL DORADO LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	5.54	5.48	3.32	2.68	4.18	7.88	11.63	12.90	14.48	7.26	3.68	4.40	83.4
FY 2002	0.32	0.00	0.00	0.60	0.70	0.94	3.39	30.54	7.10	2.51	0.70	0.00	46.80
<u>RELEASES(1000AC.FT.)</u>													
AVG 1983 THRU 2002	5.55	6.81	4.67	3.27	4.31	7.33	8.97	11.60	13.00	5.91	2.61	0.97	75.0
FY 2002	0.46	0.30	0.31	0.31	0.28	0.31	0.42	3.22	5.38	0.77	0.80	0.65	13.2
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	2.49	1.72	1.08	0.81	0.96	1.89	2.75	4.07	4.61	3.52	3.09	3.39	30.38
FY 2002	1.51	0.33	0.19	0.31	1.29	0.43	3.70	6.83	3.58	2.38	3.90	0.99	25.44
DEVIATION	-0.98	-1.39	-0.89	-0.50	0.33	-1.46	0.95	2.76	-1.03	-1.14	0.81	-2.40	-4.94
<u>POOL ELEVATION</u>													
END OF MONTH	1337.38	1337.05	1336.74	1336.58	1336.36	1336.10	1336.11	1339.25	1338.86	1338.44	1337.83	1337.08	
MAXIMUM	1337.94	1337.43	1337.06	1336.74	1336.58	1336.41	1336.15	1339.54	1339.49	1338.93	1338.44	1337.83	
MINIMUM	1337.34	1337.04	1336.74	1336.46	1336.36	1336.09	1335.96	1336.03	1338.86	1338.42	1337.83	1337.07	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	144.43	141.93	139.65	138.47	136.86	134.96	135.03	159.03	155.89	152.59	147.84	142.16	
EUFAULA LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	335.70	285.30	283.21	248.26	329.42	470.89	572.83	839.26	603.04	233.44	132.03	209.41	4542.8
FY 2002	227.50	0.00	0.00	137.50	255.23	578.78	883.74	257.65	347.21	58.02	25.69	14.38	2785.69
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	147.40	271.00	337.44	374.69	333.74	567.12	541.15	734.86	611.61	292.80	193.42	141.64	4546.9
FY 2002	192.12	92.04	59.25	118.10	239.98	342.55	980.24	242.46	282.15	195.77	98.84	39.27	2882.8
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	3.25	2.65	2.01	1.62	1.99	2.88	3.76	5.37	4.31	2.89	2.78	4.05	37.55
FY 2002	3.40	1.31	2.83	2.27	1.32	3.15	4.03	3.43	3.94	2.81	1.81	1.42	31.72
DEVIATION	0.15	-1.34	0.82	0.65	-0.67	0.27	0.27	-1.94	-0.37	-0.08	-0.97	-2.63	-5.83
<u>POOL ELEVATION</u>													
END OF MONTH	582.06	581.42	585.00	584.99	584.79	586.75	585.47	585.22	585.33	583.50	582.21	581.49	
MAXIMUM	583.52	582.12	585.02	585.09	585.32	587.99	589.76	585.64	585.92	585.45	583.50	582.23	
MINIMUM	581.48	581.42	581.25	584.69	584.76	584.67	585.05	584.84	585.12	583.50	582.21	581.48	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	2020.72	1961.70	2314.57	2313.53	2292.77	2505.05	2365.00	2338.17	2349.98	2160.75	2035.08	1968.13	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

<u>FALL RIVER LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	16.18	18.05	11.62	9.60	13.63	27.00	36.52	37.05	38.86	15.91	6.74	12.99	244.2
FY 2002	1.60	0.00	0.00	0.97	1.30	1.45	9.71	113.53	15.14	3.42	0.67	0.14	147.94
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	14.79	19.32	18.12	10.90	14.41	34.44	34.91	33.83	41.14	25.46	6.77	5.99	260.1
FY 2002	13.93	0.89	0.52	0.26	0.23	0.26	5.62	56.07	70.56	4.17	0.93	0.38	153.8
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.39	2.86	3.16	2.10	1.60	1.44	1.45	1.94	2.78	3.11	4.10	4.20	32.12
FY 2002	1.34	0.39	0.21	0.50	1.39	0.39	3.25	7.56	2.48	2.67	5.94	1.23	27.35
DEVIATION	-2.05	-2.47	-2.95	-1.60	-0.21	-1.05	1.80	5.62	-0.30	-0.44	1.84	-2.97	-4.77
<u>POOL ELEVATION</u>													
END OF MONTH	948.54	948.32	948.24	948.44	948.72	949.01	950.33	964.50	949.81	949.01	948.39	947.78	
MAXIMUM	953.32	948.56	948.32	948.44	948.80	949.05	950.58	965.14	964.50	950.00	949.01	948.39	
MINIMUM	948.51	948.20	948.21	948.19	948.43	948.70	948.91	948.82	949.81	948.94	948.39	947.78	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	22.72	22.21	22.02	22.49	23.14	23.82	27.18	83.52	25.83	23.82	22.37	20.99	

<u>FORT SUPPLY LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	5.09	3.06	2.70	2.19	2.39	3.41	4.74	10.40	9.36	3.59	2.99	3.17	53.1
FY 2002	1.23	0.00	0.00	1.24	1.94	1.33	2.17	2.06	2.68	1.34	0.89	0.38	15.27
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1.68	1.80	1.63	2.24	2.51	3.52	3.94	6.67	3.66	0.79	0.62	0.87	29.9
FY 2002	0.00	0.80	0.00	1.23	1.57	1.42	0.97	1.49	1.83	0.00	0.00	0.00	9.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	1.50	0.90	0.66	0.51	0.72	1.21	1.68	3.33	3.00	2.36	2.39	1.88	20.14
FY 2002	0.04	0.99	0.05	0.19	1.14	0.06	1.34	1.87	2.72	2.68	3.01	1.79	15.88
DEVIATION	-1.46	0.09	-0.61	-0.32	0.42	-1.15	-0.34	-1.46	-0.28	0.32	0.62	-0.09	-4.26
<u>POOL ELEVATION</u>													
END OF MONTH	2004.08	2003.92	2004.68	2004.50	2004.50	2004.08	2004.29	2004.13	2003.92	2004.07	2004.01	2003.81	
MAXIMUM	2004.13	2004.50	2004.68	2004.74	2004.62	2004.70	2004.47	2004.41	2004.95	2004.07	2004.08	2004.02	
MINIMUM	2003.77	2003.86	2003.92	2004.02	2003.98	2003.75	2003.99	2003.93	2003.89	2003.89	2003.90	2003.81	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	12.43	12.15	13.56	13.22	13.22	12.43	12.83	12.53	12.15	12.41	12.30	11.96	



SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

FORT GIBSON LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	411.15	444.33	397.65	360.12	409.12	646.69	838.50	923.51	882.52	502.76	255.32	307.10	6378.8
FY 2002	228.99	0.00	0.00	140.13	364.16	306.84	371.40	1935.01	835.04	250.12	118.26	27.66	4577.63
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	414.61	513.76	546.48	444.33	428.55	841.64	909.86	883.89	840.73	596.23	260.25	223.56	6903.9
FY 2002	216.78	121.63	176.89	121.08	385.18	291.62	362.04	1634.61	1093.86	255.84	143.03	14.60	4817.2
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.51	3.11	2.23	1.91	2.19	3.13	4.06	5.14	4.80	2.99	3.08	4.33	40.46
FY 2002	4.89	2.26	2.24	1.99	0.86	2.05	3.53	5.03	2.70	2.48	4.54	1.30	33.87
DEVIATION	1.38	-0.85	0.01	0.08	-1.33	-1.08	-0.53	-0.11	-2.10	-0.51	1.46	-3.03	-6.59
<u>POOL ELEVATION</u>													
END OF MONTH	554.37	554.27	554.28	555.12	553.87	554.43	554.58	566.58	555.60	554.82	552.99	553.40	
MAXIMUM	555.12	555.08	556.80	555.12	555.57	556.07	555.82	567.87	566.58	556.67	554.99	553.50	
MINIMUM	553.80	554.07	554.12	553.46	553.87	553.81	553.58	554.13	555.05	554.35	552.98	552.64	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	372.34	370.41	370.60	386.90	362.77	373.50	376.39	668.24	396.50	381.03	346.32	353.98	

GREAT SALT PLAINS	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	25.45	20.77	13.06	12.78	16.95	33.66	40.98	62.35	54.05	28.71	25.85	21.03	355.6
FY 2002	2.29	0.00	0.00	12.40	12.79	14.93	13.32	21.92	29.55	16.50	39.68	3.70	167.08
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	27.77	39.35	22.14	18.39	22.24	52.32	57.32	72.25	70.13	39.67	30.23	19.74	471.5
FY 2002	1.48	1.66	3.57	8.28	12.57	9.37	10.18	16.07	26.71	8.90	36.18	3.43	138.4
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	1.86	1.23	0.92	0.65	0.86	1.54	2.22	3.53	3.58	2.59	2.98	2.35	24.31
FY 2002	0.23	0.57	0.18	0.01	1.59	0.14	1.62	2.51	2.95	2.98	4.40	0.84	18.02
DEVIATION	-1.63	-0.66	-0.74	-0.64	0.73	-1.40	-0.60	-1.02	-0.63	0.39	1.42	-1.51	-6.29
<u>POOL ELEVATION</u>													
END OF MONTH	1124.65	1124.75	1125.15	1125.45	1125.11	1125.24	1125.20	1125.44	1125.15	1125.46	1125.29	1124.87	
MAXIMUM	1124.67	1125.46	1125.85	1125.57	1125.86	1125.63	1125.64	1125.71	1126.29	1125.81	1126.86	1125.39	
MINIMUM	1123.87	1124.10	1124.75	1124.98	1125.02	1124.95	1124.96	1125.03	1124.99	1124.81	1125.02	1124.85	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	23.51	24.25	27.37	29.89	27.03	28.12	27.79	29.80	27.37	29.97	28.54	25.14	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

HEYBURN LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1929 THRU 2002	2.94	3.35	2.65	1.93	3.26	5.42	7.55	9.76	8.01	2.06	1.37	3.07	51.4
FY 2002	0.62	0.00	0.00	1.89	0.46	1.24	7.32	7.47	2.70	0.17	0.60	0.01	22.47
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	2.91	3.99	3.71	2.82	4.62	8.93	7.71	13.48	7.48	0.99	0.61	0.64	57.9
FY 2002	0.00	0.00	0.00	0.31	0.56	0.70	6.81	6.96	2.64	0.02	0.00	0.00	18.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.14	2.45	1.68	1.45	1.55	2.64	3.51	4.90	4.04	2.92	2.80	3.90	34.99
FY 2002	2.98	1.96	1.51	2.73	0.91	2.79	3.09	5.09	3.57	2.78	4.03	1.81	33.25
DEVIATION	-0.16	-0.49	-0.17	1.28	-0.64	0.15	-0.42	0.19	-0.47	-0.14	1.23	-2.09	-1.74
<u>POOL ELEVATION</u>													
END OF MONTH	760.38	760.77	760.95	762.55	761.43	761.59	761.79	762.00	761.53	761.20	761.41	760.83	
MAXIMUM	760.66	760.80	760.99	762.69	762.55	762.22	763.52	765.81	762.93	761.59	761.50	761.41	
MINIMUM	759.85	760.38	760.63	760.94	761.42	761.42	761.47	761.62	761.53	761.04	760.89	760.83	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	6.18	6.49	6.64	8.08	7.05	7.19	7.37	7.55	7.14	6.85	7.04	6.54	

HULAH LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1918 THRU 2002	29.78	24.57	14.09	11.65	15.18	32.62	43.85	52.36	42.91	26.50	10.66	23.68	327.8
FY 2002	0.82	0.00	0.00	1.03	0.97	0.25	4.24	94.84	40.56	3.25	1.15	1.19	148.31
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	27.64	25.33	22.23	18.16	16.90	52.38	46.98	52.49	56.19	36.07	5.43	7.02	366.8
FY 2002	1.24	1.18	1.20	1.19	1.06	1.16	0.62	38.19	71.20	5.27	1.70	3.06	127.1
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.83	2.22	1.32	1.12	1.20	2.23	3.27	4.82	4.48	3.18	3.09	3.92	33.67
FY 2002	1.69	0.83	0.62	0.81	1.13	0.44	4.37	7.71	4.42	3.24	1.80	4.00	31.06
DEVIATION	-1.14	-1.39	-0.70	-0.31	-0.07	-1.79	1.10	2.89	-0.06	0.06	-1.29	0.08	-2.61
<u>POOL ELEVATION</u>													
END OF MONTH	728.20	727.20	726.66	726.24	725.73	724.88	728.23	742.00	736.25	735.35	734.31	733.32	
MAXIMUM	729.83	728.23	727.22	726.97	726.24	725.82	728.23	742.00	743.39	736.25	735.35	734.32	
MINIMUM	728.20	727.17	726.66	725.96	725.73	724.88	724.58	728.23	736.25	735.30	734.31	733.32	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	16.60	14.25	13.10	12.24	11.27	9.79	11.68	67.19	33.76	30.17	30.02	26.30	

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JOHN REDMOND DAM	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	77.25	66.72	44.68	37.43	50.00	98.95	138.32	159.87	167.57	119.57	45.92	64.14	1070.4
FY 2002	4.20	0.00	0.00	6.35	5.95	5.77	42.45	180.20	97.69	13.74	6.82	3.06	366.23
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	62.77	76.32	64.84	37.94	49.32	114.44	136.98	155.56	188.66	119.83	71.55	36.03	1114.2
FY 2002	2.75	3.12	1.96	1.32	1.21	1.34	20.30	115.32	174.90	10.17	3.00	2.89	338.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.42	1.71	1.13	0.80	0.86	2.00	2.83	4.27	4.61	3.77	3.42	3.61	31.43
FY 2002	1.49	0.29	0.12	0.19	1.26	0.49	3.67	5.39	3.26	1.10	2.86	1.63	21.75
DEVIATION	-0.93	-1.42	-1.01	-0.61	0.40	-1.51	0.84	1.12	-1.35	-2.67	-0.56	-1.98	-9.68
<u>POOL ELEVATION</u>													
END OF MONTH	1037.09	1037.24	1037.53	1037.99	1038.05	1038.07	1039.96	1045.83	1037.07	1036.96	1036.90	1036.42	
MAXIMUM	1037.50	1037.41	1037.77	1038.01	1038.31	1038.39	1040.39	1045.83	1046.30	1037.39	1037.01	1036.90	
MINIMUM	1036.98	1037.09	1037.22	1037.53	1037.97	1037.91	1037.89	1039.07	1037.04	1036.89	1036.75	1036.42	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	35.65	36.79	39.00	42.50	42.97	43.13	58.41	118.46	35.50	34.68	34.24	30.77	

KAW LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	164.26	146.09	101.70	88.84	115.21	209.52	260.69	327.10	360.15	236.81	138.35	134.94	2283.7
FY 2002	52.96	0.00	0.00	42.45	46.14	47.40	82.24	393.97	347.36	43.09	79.58	41.87	1177.04
<u>RELEASES(1000AC.FT.)</u>													
AVG 1977 THRU 2002	141.42	168.47	117.79	140.02	123.86	250.20	286.68	288.90	375.10	287.50	139.58	117.68	2437.2
FY 2002	31.44	29.99	15.61	96.25	39.99	23.24	37.36	226.21	354.12	167.85	115.65	35.96	1173.7
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.30	1.70	1.03	0.78	0.98	1.89	2.64	4.10	4.31	3.36	3.09	3.24	29.41
FY 2002	1.01	0.57	0.13	0.24	1.30	0.40	2.88	5.38	4.82	2.36	3.84	1.71	24.64
DEVIATION	-1.29	-1.13	-0.90	-0.54	0.32	-1.49	0.24	1.28	0.51	-1.00	0.75	-1.53	-4.77
<u>POOL ELEVATION</u>													
END OF MONTH	1009.25	1009.86	1010.97	1007.43	1007.56	1008.60	1010.73	1018.94	1018.00	1011.02	1008.33	1008.24	
MAXIMUM	1009.60	1010.12	1010.97	1011.23	1008.01	1008.63	1010.99	1018.94	1026.33	1018.00	1011.02	1008.94	
MINIMUM	1008.41	1009.25	1009.86	1007.43	1007.33	1007.56	1008.50	1009.92	1018.00	1011.02	1007.87	1007.94	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	394.09	404.22	423.10	364.82	366.86	383.47	419.00	579.40	559.46	423.97	379.10	377.64	

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KEYSTONE LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1940 THRU 2002	456.80	387.34	327.87	228.52	287.49	527.22	638.99	887.29	783.28	584.64	337.49	320.61	5767.5
FY 2002	61.49	0.00	0.00	144.79	117.17	77.95	132.12	475.54	754.33	255.95	285.02	264.86	2569.23
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	405.78	384.57	287.23	289.07	297.66	661.62	694.72	853.71	873.76	624.24	369.21	271.46	6013.0
FY 2002	117.10	90.88	33.13	37.10	137.32	65.34	123.53	267.61	700.31	448.60	327.14	243.87	2591.9
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	3.41	2.37	2.13	0.91	1.12	1.97	2.82	4.24	4.05	2.98	2.91	3.25	32.16
FY 2002	0.65	1.41	0.32	0.72	1.20	0.78	2.82	3.42	3.69	2.95	4.06	3.09	25.11
DEVIATION	-2.76	-0.96	-1.81	-0.19	0.08	-1.19	0.00	-0.82	-0.36	-0.03	1.15	-0.16	-7.05
<u>POOL ELEVATION</u>													
END OF MONTH	719.90	718.38	719.31	724.20	723.09	723.25	723.31	730.77	731.98	724.55	722.19	722.71	
MAXIMUM	722.93	720.60	719.43	724.20	724.41	723.41	724.74	730.77	736.70	731.98	724.59	723.85	
MINIMUM	719.67	718.38	718.38	719.24	722.94	721.67	722.88	722.08	730.77	724.55	721.90	720.88	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	440.76	412.03	429.43	533.26	507.46	511.14	512.53	710.95	748.48	541.70	487.64	499.03	
<u>LAKE HUDSON</u>													
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	384.37	390.92	359.09	326.27	380.07	587.62	756.96	850.05	815.10	472.87	245.06	283.39	5851.8
FY 2002	217.49	0.00	0.00	121.69	348.50	255.69	283.44	1850.68	838.02	257.55	100.16	17.95	4291.16
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	360.76	494.25	497.01	387.73	432.97	759.57	840.54	841.89	783.66	530.78	270.40	242.63	6442.2
FY 2002	219.94	93.22	144.96	118.61	344.08	254.08	286.49	1773.33	896.34	251.05	98.93	27.02	4508.1
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	3.58	3.13	2.21	1.85	1.99	3.13	4.03	5.07	4.82	2.94	3.17	4.48	40.40
FY 2002	4.20	1.62	2.90	2.68	0.95	2.27	3.47	6.83	3.26	3.36	3.34	1.80	36.68
DEVIATION	0.62	-1.51	0.69	0.83	-1.04	-0.86	-0.56	1.76	-1.56	0.42	0.17	-2.68	-3.72
<u>POOL ELEVATION</u>													
END OF MONTH	619.04	618.70	619.71	619.66	619.83	619.93	619.30	625.35	620.08	620.14	619.76	618.53	
MAXIMUM	619.91	619.78	619.71	620.06	619.94	621.00	621.81	626.83	625.35	620.72	620.81	620.79	
MINIMUM	619.04	618.62	618.14	616.33	619.11	619.36	618.57	618.61	619.61	619.18	619.12	617.78	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	200.74	197.09	208.15	207.59	209.47	210.58	203.62	276.60	212.26	212.94	208.70	195.27	

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MARION LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1939 THRU 2002	4.20	3.30	2.26	2.43	3.37	6.52	7.76	10.88	9.95	7.56	2.78	4.59	65.6
FY 2002	0.66	0.00	0.00	1.71	0.89	1.11	8.20	11.72	6.48	0.17	1.12	0.12	32.18
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	2.82	3.45	3.29	1.27	3.07	4.40	5.88	8.39	7.36	7.31	2.76	1.45	51.4
FY 2002	0.54	0.52	0.26	0.09	0.08	0.09	0.11	6.61	4.66	0.77	0.77	0.48	15.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.37	1.56	0.95	0.73	0.92	1.85	2.67	4.31	4.46	3.60	3.23	3.31	29.94
FY 2002	1.59	0.10	0.07	0.18	1.25	0.38	4.84	4.62	2.66	0.86	2.53	2.37	21.45
DEVIATION	-0.78	-1.46	-0.88	-0.55	0.33	-1.47	2.17	0.31	-1.80	-2.74	-0.70	-0.94	-8.49
<u>POOL ELEVATION</u>													
END OF MONTH	1349.70	1349.48	1349.34	1349.41	1349.33	1349.25	1350.19	1350.57	1350.24	1349.45	1348.94	1348.35	
MAXIMUM	1350.06	1349.73	1349.53	1349.43	1349.52	1349.50	1350.21	1351.01	1350.97	1350.24	1349.45	1348.94	
MINIMUM	1349.65	1349.48	1349.32	1349.22	1349.31	1349.24	1349.01	1350.13	1350.24	1349.45	1348.94	1348.30	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	75.69	74.37	73.54	73.96	73.48	73.00	78.66	81.02	78.97	74.19	71.15	67.72	

LAKE MEREDITH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	17.71	3.63	2.06	3.31	2.69	3.75	10.64	30.62	33.63	32.33	30.76	26.16	197.3
FY 2002	0.00	0.00	0.00	2.34	1.47	0.22	4.71	3.06	2.28	6.32	5.56	6.84	32.81
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	1.21	0.56	0.48	0.50	0.49	0.71	1.10	2.32	2.30	2.65	2.53	1.72	16.58
FY 2002	0.13	1.02	0.12	0.35	0.40	0.37	0.94	0.23	2.35	1.96	2.76	1.65	12.28
DEVIATION	-1.08	0.46	-0.36	-0.15	-0.09	-0.34	-0.16	-2.09	0.05	-0.69	0.23	-0.07	-4.30
<u>POOL ELEVATION</u>													
END OF MONTH	2892.34	2891.60	2890.82	2890.42	2889.86	2888.76	2888.26	2887.06	2885.74	2884.94	2884.02	2883.49	
MAXIMUM	2894.01	2892.34	2891.60	2890.83	2890.42	2889.86	2888.78	2888.26	2887.06	2885.74	2884.94	2884.14	
MINIMUM	2892.34	2891.60	2890.82	2890.32	2889.83	2888.74	2888.25	2887.06	2885.74	2884.94	2883.88	2883.49	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	267.82	261.99	255.94	252.90	248.66	240.52	236.89	228.30	219.04	213.52	207.25	203.69	

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LAKE THUNDERBIRD	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	4.99	2.84	3.34	2.61	4.10	6.71	9.00	13.47	10.00	3.61	1.47	3.18	65.3
FY 2002	3.89	0.00	0.00	5.59	3.06	4.96	14.78	3.33	5.51	2.70	0.81	2.56	47.19
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	2.08	3.70	2.68	3.53	3.03	6.97	6.76	8.82	8.42	2.90	1.26	0.55	50.7
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	10.96	1.28	0.00	0.00	0.00	0.00	12.2
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.85	2.15	1.61	1.29	1.64	2.43	3.34	5.02	4.30	2.64	2.58	3.51	33.35
FY 2002	2.40	0.90	1.67	2.31	0.83	1.94	4.89	1.59	3.55	3.11	2.27	3.27	28.73
DEVIATION	-0.45	-1.25	0.06	1.02	-0.81	-0.49	1.55	-3.43	-0.75	0.47	-0.31	-0.24	-4.62
<u>POOL ELEVATION</u>													
END OF MONTH	1038.77	1038.51	1038.69	1039.18	1039.27	1039.55	1039.50	1039.16	1039.17	1038.73	1037.92	1037.57	
MAXIMUM	1039.12	1039.68	1038.77	1039.18	1039.36	1039.58	1041.15	1039.50	1039.50	1039.33	1038.73	1037.92	
MINIMUM	1038.55	1037.71	1038.47	1038.65	1039.18	1039.25	1039.50	1039.10	1039.03	1038.71	1037.92	1037.57	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	118.22	116.66	117.74	120.70	121.25	122.96	122.65	120.58	120.64	117.98	113.14	111.11	
OOLOGAH LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	140.10	149.56	104.13	100.93	111.44	220.24	293.40	317.32	309.83	153.43	53.70	98.74	2052.8
FY 2002	34.86	0.00	0.00	25.29	16.54	15.00	42.53	667.54	383.54	27.43	11.01	7.22	1230.96
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	127.68	140.97	143.71	112.83	119.71	277.41	290.73	294.17	317.13	228.51	63.90	37.30	2154.1
FY 2002	11.85	8.60	0.00	0.00	17.66	0.00	14.81	377.11	488.31	162.16	0.00	0.00	1080.5
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.06	2.46	1.53	1.29	1.34	2.57	3.60	4.90	4.88	3.38	3.17	4.32	36.51
FY 2002	3.56	1.31	1.19	1.82	0.57	0.61	3.37	8.22	4.17	4.35	2.45	2.75	34.37
DEVIATION	0.50	-1.15	-0.34	0.53	-0.77	-1.96	-0.23	3.32	-0.71	0.97	-0.72	-1.57	-2.14
<u>POOL ELEVATION</u>													
END OF MONTH	638.27	637.98	637.91	638.45	638.11	638.21	638.64	646.29	642.90	638.21	637.80	637.43	
MAXIMUM	639.32	638.60	638.24	638.45	638.52	638.42	638.72	646.31	646.84	642.90	638.21	637.85	
MINIMUM	638.01	637.85	637.82	637.58	637.85	638.00	638.03	638.21	642.90	638.03	637.65	637.37	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	560.76	551.61	549.50	566.46	555.70	558.86	572.47	846.90	717.47	558.86	546.18	535.00	

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<u>PENSACOLA LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	347.82	385.54	310.53	282.30	345.03	541.57	693.70	760.67	743.33	404.42	184.19	264.03	5263.1
FY 2002	235.93	0.00	0.00	136.46	322.91	269.95	301.88	2129.35	720.30	160.46	54.54	32.73	4364.53
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	335.78	438.51	431.67	327.76	380.44	656.26	715.92	759.14	683.50	502.63	265.62	230.28	5727.5
FY 2002	218.47	110.00	153.88	115.42	365.21	235.76	264.32	1865.52	834.80	264.74	99.51	16.67	4544.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.34	2.83	1.84	1.64	1.69	2.94	3.86	4.87	4.89	3.47	3.26	4.37	39.01
FY 2002	3.25	1.90	1.76	1.95	0.74	1.48	2.97	6.67	3.05	2.98	1.70	1.97	30.42
DEVIATION	-0.09	-0.93	-0.08	0.31	-0.95	-1.46	-0.89	1.80	-1.84	-0.49	-1.56	-2.40	-8.59
<u>POOL ELEVATION</u>													
END OF MONTH	741.80	741.92	742.70	743.00	741.83	742.35	742.86	748.13	745.27	742.48	740.98	740.97	
MAXIMUM	743.58	742.30	743.24	743.00	744.73	743.04	742.92	748.48	748.19	745.31	742.48	741.02	
MINIMUM	741.63	741.69	741.90	741.62	741.71	741.68	741.77	742.34	745.27	742.46	740.87	740.67	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	1528.40	1533.56	1567.80	1581.00	1529.69	1552.40	1574.84	1822.50	1684.69	1558.12	1493.16	1492.74	

<u>SKIATOOK LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1936 THRU 2002	12.06	10.55	7.23	5.89	9.31	19.65	22.81	32.13	20.31	9.04	4.28	10.69	163.9
FY 2002	0.28	0.00	0.00	8.18	1.67	2.08	18.50	33.33	18.95	2.53	3.87	0.55	89.94
<u>RELEASES(1000AC.FT.)</u>													
AVG 1989 THRU 2002	6.28	4.36	3.29	9.94	7.93	23.38	20.20	36.30	29.35	18.44	10.44	7.55	177.5
FY 2002	4.37	2.06	1.94	1.45	0.72	1.22	3.11	0.07	5.59	8.05	7.98	7.94	44.5
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.98	2.38	1.45	1.31	1.53	2.45	3.37	4.61	4.33	3.11	3.08	4.06	34.66
FY 2002	1.79	3.11	1.17	3.05	0.66	1.41	4.29	6.38	4.11	2.56	5.03	3.21	36.77
DEVIATION	-1.19	0.73	-0.28	1.74	-0.87	-1.04	0.92	1.77	-0.22	-0.55	1.95	-0.85	2.11
<u>POOL ELEVATION</u>													
END OF MONTH	709.04	708.66	708.19	708.71	708.54	708.40	709.67	712.62	713.32	712.21	711.21	709.99	
MAXIMUM	710.05	709.24	708.66	708.71	708.86	708.66	709.67	712.63	713.78	713.32	712.21	711.21	
MINIMUM	708.96	708.66	708.19	707.65	708.54	708.33	708.17	709.65	712.31	712.00	711.21	709.99	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	273.83	270.33	266.01	270.79	269.23	267.94	279.74	308.71	315.82	304.56	294.56	282.74	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

<u>TENKILLER FERRY LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	56.66	83.06	94.61	89.69	104.15	148.41	171.49	178.97	120.64	49.61	36.14	35.35	1168.8
FY 2002	50.78	0.00	0.00	51.72	104.03	206.08	250.02	119.90	76.86	26.88	62.88	10.41	959.55
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	49.67	70.61	105.91	114.95	88.78	143.28	170.84	126.81	106.55	78.42	46.20	31.61	1133.6
FY 2002	39.08	40.38	124.23	59.17	101.05	145.57	301.47	85.72	80.28	58.07	38.17	23.26	1096.5
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.49	3.29	2.50	2.12	2.47	3.39	4.22	5.22	4.45	2.96	3.08	4.08	41.26
FY 2002	3.87	2.04	3.59	2.08	1.86	4.16	5.56	4.58	2.69	1.95	4.91	1.36	38.65
DEVIATION	0.38	-1.25	1.09	-0.04	-0.61	0.77	1.34	-0.64	-1.76	-1.01	1.83	-2.72	-2.61
<u>POOL ELEVATION</u>													
END OF MONTH	625.96	626.46	632.61	631.93	632.00	636.35	632.10	634.31	633.52	630.63	632.07	630.69	
MAXIMUM	627.60	627.21	634.06	632.63	632.87	637.69	640.24	634.31	636.72	633.52	632.85	632.23	
MINIMUM	624.92	625.78	626.35	631.34	631.71	632.00	632.10	631.72	633.52	630.63	629.81	630.69	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	579.54	585.43	662.09	653.18	654.10	711.76	655.41	684.36	674.01	636.45	655.02	637.19	

<u>TORONTO LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1922 THRU 2002	21.86	23.94	15.39	12.46	18.09	35.21	48.70	46.58	51.67	29.61	10.79	20.75	335.0
FY 2002	0.92	0.00	0.00	1.11	2.14	1.67	14.14	138.54	12.94	3.86	0.67	0.19	176.19
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	24.64	30.55	22.04	10.98	20.61	43.31	42.39	43.87	55.91	19.74	12.77	10.92	337.7
FY 2002	7.62	0.88	0.52	0.26	0.23	0.26	6.67	75.22	79.16	3.23	0.55	0.52	175.1
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.71	2.10	1.26	1.04	1.03	2.32	3.04	4.10	4.86	3.71	3.49	3.82	33.48
FY 2002	1.48	0.32	0.27	0.60	1.25	0.39	3.16	7.61	3.07	2.69	3.34	1.14	25.32
DEVIATION	-1.23	-1.78	-0.99	-0.44	0.22	-1.93	0.12	3.51	-1.79	-1.02	-0.15	-2.68	-8.16
<u>POOL ELEVATION</u>													
END OF MONTH	901.33	901.09	901.05	901.29	901.84	902.13	904.46	917.81	902.10	901.80	901.28	900.68	
MAXIMUM	903.99	901.36	901.14	901.45	901.95	902.22	904.74	919.53	917.81	902.34	901.80	901.60	
MINIMUM	901.29	901.08	900.99	900.98	901.26	901.83	901.98	902.13	902.10	901.64	901.28	900.63	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	20.58	19.94	19.84	20.47	21.94	22.72	29.50	91.24	22.64	21.83	20.45	18.91	



SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
ARKANSAS RIVER BASIN

WISTER LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1939 THRU 2002	31.46	67.40	86.48	78.96	104.48	126.89	122.05	141.87	59.62	18.43	7.88	17.39	862.9
FY 2002	44.88	0.00	0.00	121.05	156.99	380.92	273.72	87.23	61.69	5.44	1.12	0.02	1133.06
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	21.40	51.93	119.01	104.68	97.41	126.86	108.07	118.08	99.26	18.37	6.90	10.32	882.3
FY 2002	43.57	1.01	166.18	107.05	230.30	132.28	343.90	221.65	92.93	3.32	1.22	2.38	1345.8
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.55	3.71	3.06	2.70	2.97	3.72	4.36	5.72	4.00	3.41	3.09	3.96	44.26
FY 2002	3.31	1.93	6.88	2.72	2.31	5.10	4.63	3.93	2.49	2.51	1.31	0.62	37.74
DEVIATION	-0.24	-1.78	3.82	0.02	-0.66	1.38	0.27	-1.79	-1.51	-0.90	-1.78	-3.34	-6.52
<u>POOL ELEVATION</u>													
END OF MONTH	478.03	478.46	484.99	486.08	478.36	497.05	492.82	482.15	478.09	477.91	477.31	476.48	
MAXIMUM	481.76	478.46	493.28	486.08	491.72	498.73	503.45	492.82	482.15	478.33	477.91	477.31	
MINIMUM	477.88	478.00	478.36	478.23	478.36	478.30	492.82	478.45	477.99	477.76	477.31	476.48	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	61.66	64.96	126.04	138.79	64.19	310.25	234.30	96.70	62.12	60.78	56.49	50.79	

NEWT GRAHM L&D	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	288.89	243.55	192.50	191.43	186.38	376.70	508.41	565.53	526.50	281.62	101.73	143.24	3606.5
FY 2002	49.69	0.00	0.00	44.73	80.73	49.59	134.78	655.48	712.16	228.97	45.46	38.38	2039.96
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	250.81	286.04	287.55	237.08	269.08	557.45	559.42	623.38	588.88	365.84	117.15	97.45	4240.1
FY 2002	49.81	52.95	38.48	44.67	80.30	49.34	134.30	654.65	711.90	228.07	44.77	37.68	2126.9
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.08	2.49	1.63	1.39	1.51	2.59	3.58	4.79	4.58	3.14	3.00	4.21	36.00
FY 2002	3.14	2.48	1.57	2.47	0.79	1.45	3.96	6.08	3.84	2.98	3.61	2.30	34.67
DEVIATION	0.06	-0.01	-0.06	1.08	-0.72	-1.14	0.38	1.29	-0.74	-0.16	0.61	-1.91	-1.33
<u>POOL ELEVATION</u>													
END OF MONTH	532.28	532.69	532.69	532.60	532.69	532.59	532.56	532.76	532.50	532.64	532.61	532.67	
MAXIMUM	532.85	532.88	532.95	532.86	532.83	532.85	532.90	532.96	532.94	532.94	532.98	532.84	
MINIMUM	512.05	532.21	532.25	532.43	532.22	532.37	531.94	531.86	531.85	532.19	532.39	532.42	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	23.92	24.55	24.55	24.41	24.55	24.40	24.35	24.66	24.26	24.48	24.43	24.52	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

<u>ROBERT S KERR L&amp;D</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1943 THRU 2002	1453.62	1518.58	1447.06	1338.26	1462.47	2618.77	2914.73	3536.49	3137.64	2155.26	1027.27	1135.02	23745.2
FY 2002	698.08	0.00	0.00	437.85	1078.12	1350.45	2428.56	3393.42	3160.06	1190.68	695.90	343.74	14776.85
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1425.60	1772.08	1836.41	1664.50	1641.38	3236.09	3293.25	3742.32	3410.03	2031.58	996.59	794.19	25844.0
FY 2002	695.76	427.33	750.44	409.48	1078.65	1360.43	2434.93	3344.10	3149.35	1176.17	655.12	328.97	15810.7
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.62	3.31	2.57	2.16	2.49	3.42	4.31	5.41	4.37	3.05	2.95	4.17	41.84
FY 2002	3.88	2.33	4.12	1.98	1.64	5.79	4.82	4.22	3.66	2.05	2.23	0.41	37.13
DEVIATION	0.26	-0.98	1.55	-0.18	-0.85	2.37	0.51	-1.19	-0.71	-1.00	-0.72	-3.76	-4.71
<u>POOL ELEVATION</u>													
END OF MONTH	459.70	459.96	459.60	460.13	459.95	459.50	459.03	459.81	459.54	459.37	459.88	459.81	
MAXIMUM	460.21	460.16	460.30	460.13	460.26	460.22	460.65	460.01	460.13	460.21	460.10	460.13	
MINIMUM	459.48	459.59	459.38	459.09	459.31	459.21	458.82	457.98	459.19	459.37	459.37	459.60	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	512.76	523.96	508.45	531.55	523.53	504.14	483.88	517.50	505.86	498.53	520.52	517.50	
<u>W. D. MAYO L&amp;D</u>													
	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1943 THRU 2002	1464.16	1568.21	1449.49	1371.61	1472.74	2647.20	2968.09	3525.48	3085.83	2112.50	1008.53	1108.79	23782.6
FY 2002	594.25	374.98	688.46	352.26	947.21	1243.83	2214.45	2942.97	2757.72	1032.59	552.79	273.12	13974.64
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1464.03	1779.75	1858.69	1704.34	1641.60	3240.30	3276.45	3697.87	3395.69	2028.76	1001.04	798.57	25887.1
FY 2002	594.18	379.88	688.08	351.82	947.54	1243.77	2215.99	2948.06	2758.09	1031.17	551.68	272.94	13983.2
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.38	3.55	2.65	2.27	2.63	3.51	4.27	5.22	3.99	2.97	2.78	3.90	41.12
FY 2002	3.66	2.80	4.99	2.15	2.09	7.92	6.58	4.19	2.79	2.62	3.12	0.22	43.13
DEVIATION	0.28	-0.75	2.34	-0.12	-0.54	4.41	2.31	-1.03	-1.20	-0.35	0.34	-3.68	2.01
<u>POOL ELEVATION</u>													
END OF MONTH	412.58	412.32	412.48	412.70	412.41	412.21	412.69	412.62	412.01	412.53	412.84	412.68	
MAXIMUM	412.99	412.99	413.19	413.07	412.90	413.08	413.79	412.94	412.99	413.05	413.05	413.04	
MINIMUM	411.85	411.97	411.86	410.05	412.04	411.59	411.73	411.38	411.59	411.64	411.61	412.04	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	15.10	14.69	14.94	15.29	14.83	14.51	15.28	15.17	14.20	15.02	15.52	15.26	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
ARKANSAS RIVER BASIN

CHOUTEAU L&D	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1923 THRU 2002	291.21	256.91	205.16	194.57	189.99	391.55	516.97	576.16	539.70	285.53	103.01	147.96	3698.7
FY 2002	47.60	0.00	0.00	44.83	73.63	57.92	152.21	723.51	731.13	234.82	49.31	34.61	2149.56
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	253.32	304.49	303.77	246.71	279.66	578.76	582.48	654.58	623.97	376.13	120.39	96.06	4420.3
FY 2002	46.89	47.91	46.03	45.28	72.48	57.28	151.39	722.45	730.26	232.79	48.18	33.45	2234.4
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.44	2.92	2.07	1.79	1.93	2.90	3.90	5.06	4.59	2.88	2.77	4.03	38.27
FY 2002	5.06	3.44	1.54	1.66	0.78	2.75	3.81	5.77	2.40	2.62	3.95	1.12	34.90
DEVIATION	1.62	0.52	-0.53	-0.13	-1.15	-0.15	-0.09	0.71	-2.19	-0.26	1.18	-2.91	-3.37
<u>POOL ELEVATION</u>													
END OF MONTH	511.54	511.63	511.64	511.29	511.58	511.57	511.52	511.56	511.33	511.62	511.52	511.56	
MAXIMUM	511.88	511.78	511.80	511.75	511.68	511.98	511.91	511.95	511.70	511.77	511.67	511.81	
MINIMUM	511.11	511.30	511.21	511.27	511.29	511.32	511.04	510.98	511.03	511.16	511.23	511.33	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	23.80	24.00	24.02	23.23	23.89	23.86	23.75	23.84	23.32	23.98	23.75	23.84	

WEBBERS FALLS L&D	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1940 THRU 2002	1138.27	1190.61	999.25	861.17	920.76	1717.02	1945.98	2375.08	2260.99	1707.47	865.73	696.77	16679.1
FY 2002	395.60	0.00	0.00	208.26	601.49	481.98	702.64	2919.07	2621.35	883.24	521.85	264.69	9600.19
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1167.04	1326.15	1254.79	1052.09	1076.42	2314.00	2410.37	2644.21	2545.63	1627.86	740.87	593.90	18753.3
FY 2002	396.60	270.60	311.85	195.56	608.04	476.93	705.45	2892.59	2633.27	877.66	514.02	266.45	10149.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.48	2.96	2.19	1.84	2.05	2.99	3.98	5.10	4.61	2.88	2.74	4.15	38.97
FY 2002	4.67	3.12	2.61	2.14	0.98	2.88	3.15	5.44	2.82	2.47	3.50	1.23	35.01
DEVIATION	1.19	0.16	0.42	0.30	-1.07	-0.11	-0.83	0.34	-1.79	-0.41	0.76	-2.92	-3.96
<u>POOL ELEVATION</u>													
END OF MONTH	489.65	489.52	489.61	490.45	489.67	489.87	489.27	491.10	489.58	489.53	489.68	489.10	
MAXIMUM	490.33	490.44	490.35	490.62	490.45	490.16	490.32	491.72	491.10	490.63	490.29	490.21	
MINIMUM	488.41	489.12	488.35	488.81	489.15	488.92	488.44	488.88	487.60	489.03	488.41	488.78	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	166.13	164.65	165.67	175.56	166.36	168.63	161.81	183.55	165.33	164.76	166.47	159.88	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
RED RIVER BASIN

ALTUS RESERVOIR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1938 THRU 2002	7.93	4.20	4.74	5.33	6.73	8.85	11.48	26.32	21.27	6.83	3.66	4.14	111.5
FY 2002	0.00	0.00	0.00	4.92	5.72	5.10	8.42	3.95	2.39	3.77	0.21	0.49	34.97
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	0.32	2.27	2.41	2.41	3.63	5.93	6.65	15.40	9.81	4.08	3.46	0.19	56.5
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.09	0.87	0.74	0.61	0.84	1.36	2.08	3.72	3.09	2.05	2.31	2.18	21.93
FY 2002	0.10	2.24	0.06	0.30	0.95	0.21	1.87	1.54	2.37	3.96	1.08	2.49	17.17
DEVIATION	-1.99	1.37	-0.68	-0.31	0.11	-1.15	-0.21	-2.18	-0.72	1.91	-1.23	0.31	-4.76
<u>POOL ELEVATION</u>													
END OF MONTH	1540.65	1540.90	1541.54	1542.72	1544.02	1544.99	1546.81	1547.30	1547.27	1543.04	1529.36	1527.20	
MAXIMUM	1541.16	1540.90	1541.54	1542.72	1544.02	1544.99	1546.81	1547.31	1547.45	1547.76	1543.04	1529.36	
MINIMUM	1540.65	1540.54	1540.90	1541.54	1542.72	1544.02	1544.99	1546.81	1547.27	0.00	1529.36	1527.20	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	48.91	49.73	51.90	55.99	60.70	64.35	71.58	73.62	73.49	57.13	18.89	14.59	
ARBUCKLE RESERVOIR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	3.60	3.65	4.54	4.18	5.58	7.75	9.02	13.39	7.86	2.75	1.80	3.94	68.0
FY 2002	7.82	0.00	0.00	2.96	2.80	6.50	26.98	7.42	6.60	2.50	4.10	1.37	69.04
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1.63	2.21	4.67	4.98	4.52	8.28	7.75	11.23	8.74	1.22	0.44	2.01	57.7
FY 2002	9.89	0.06	6.61	1.17	1.84	3.98	25.38	4.52	4.77	0.06	0.92	0.85	60.1
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.38	2.32	2.03	1.65	2.02	2.89	3.54	5.31	3.76	2.32	2.44	3.71	35.39
FY 2002	3.97	1.26	3.09	1.22	0.98	3.62	7.37	4.03	5.00	5.98	6.98	2.51	46.01
DEVIATION	0.59	-1.06	1.06	-0.43	-1.04	0.73	3.83	-1.28	1.24	3.66	4.54	-1.20	10.62
<u>POOL ELEVATION</u>													
END OF MONTH	872.07	872.14	872.05	872.21	872.02	872.39	872.50	872.44	872.36	872.39	872.84	872.30	
MAXIMUM	873.82	872.17	873.83	872.35	872.43	872.95	877.76	872.84	875.84	872.65	872.93	872.84	
MINIMUM	872.04	872.07	871.99	871.97	871.98	871.97	872.02	872.21	872.35	872.36	872.01	872.30	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	72.57	72.73	72.52	72.90	72.45	73.33	73.59	73.45	73.26	73.33	74.40	73.11	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
RED RIVER BASIN

BROKEN BOW LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1930 THRU 2002	46.33	79.00	109.11	106.02	115.08	138.93	123.17	134.67	52.92	26.60	11.79	21.70	965.3
FY 2002	25.97	0.00	0.00	118.16	106.02	253.74	182.98	110.74	18.98	4.85	4.80	5.63	831.85
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	34.21	58.61	110.95	100.59	89.28	120.56	109.78	105.15	83.31	55.23	41.06	30.97	939.7
FY 2002	30.71	16.97	122.29	132.30	169.13	114.91	267.63	78.46	70.05	58.12	50.37	29.32	1140.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	4.41	4.22	3.99	3.39	3.50	4.50	4.88	6.08	4.34	4.19	3.32	4.24	51.04
FY 2002	3.68	2.64	7.99	4.16	3.29	7.06	4.81	5.51	1.50	2.50	1.77	2.60	47.51
DEVIATION	-0.73	-1.58	4.00	0.77	-0.21	2.56	-0.07	-0.57	-2.84	-1.69	-1.55	-1.64	-3.53
<u>POOL ELEVATION</u>													
END OF MONTH	590.79	590.31	605.42	604.36	599.88	609.04	603.17	605.04	601.12	596.85	592.91	590.65	
MAXIMUM	592.40	590.79	611.79	605.42	607.29	612.14	613.46	605.77	605.13	601.14	596.85	592.91	
MINIMUM	590.78	589.75	590.31	599.57	599.88	598.89	603.17	601.63	601.12	596.85	592.91	590.65	
<u>POOL CONTENT-EOM</u> (1000AC.FT)	799.59	793.36	1004.59	988.73	923.48	1059.90	971.11	998.87	941.24	880.96	827.50	797.77	

SARDIS LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	11.60	19.62	25.37	23.68	29.08	33.48	41.25	42.86	20.08	7.32	3.33	9.30	267.0
FY 2002	29.59	0.00	0.00	24.70	27.42	78.00	88.61	13.44	10.84	9.11	1.85	0.88	284.45
<u>RELEASES(1000AC.FT.)</u>													
AVG 1985 THRU 2002	7.03	31.02	35.79	30.46	25.99	38.52	38.62	42.15	29.24	4.58	4.83	3.65	291.9
FY 2002	27.96	2.54	52.98	8.82	41.46	51.64	101.62	9.37	5.87	0.00	0.00	0.00	302.3
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.64	3.57	2.88	2.52	2.85	3.57	4.61	5.84	4.21	3.38	2.98	4.28	44.34
FY 2002	4.67	2.10	5.58	2.87	2.00	7.15	8.69	3.10	4.02	6.17	1.27	1.08	48.70
DEVIATION	1.03	-1.47	2.70	0.35	-0.85	3.58	4.08	-2.74	-0.19	2.79	-1.71	-3.20	4.36
<u>POOL ELEVATION</u>													
END OF MONTH	599.05	599.16	599.30	600.29	599.08	600.66	599.36	599.22	599.05	599.19	598.80	598.41	
MAXIMUM	601.18	599.28	602.78	600.29	600.67	603.48	603.88	599.36	599.55	599.33	599.19	598.80	
MINIMUM	599.05	598.96	599.04	598.98	599.05	599.01	599.17	598.99	599.05	599.05	598.80	598.41	
<u>POOL CONTENT-EOM</u> (1000AC.FT)	275.03	276.55	278.49	292.36	275.44	297.66	279.33	277.38	275.03	276.97	271.65	266.43	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
RED RIVER BASIN

DENISON DAM	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1906 THRU 2002	379.61	227.58	224.51	176.30	223.87	323.50	466.06	838.48	750.21	248.78	171.90	248.34	4279.1
FY 2002	209.85	0.00	0.00	80.73	98.88	330.64	962.03	194.18	285.82	129.82	138.94	55.56	2486.45
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	244.93	265.92	272.10	341.61	256.35	497.94	412.85	603.49	900.32	387.31	223.57	186.18	4592.6
FY 2002	78.83	30.88	193.01	208.46	156.56	192.01	813.24	175.71	63.45	233.66	184.76	103.02	2433.6
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.43	1.42	1.21	1.09	1.31	1.73	2.45	4.13	3.36	2.13	2.25	2.83	26.34
FY 2002	0.94	1.65	0.81	1.04	0.66	1.56	3.14	1.70	2.88	3.53	1.89	1.59	21.39
DEVIATION	-1.49	0.23	-0.40	-0.05	-0.65	-0.17	0.69	-2.43	-0.48	1.40	-0.36	-1.24	-4.95
<u>POOL ELEVATION</u>													
END OF MONTH	617.19	617.34	617.33	615.60	614.63	616.12	617.55	617.43	619.45	617.84	616.80	615.86	
MAXIMUM	617.46	617.47	618.62	617.33	615.60	616.72	621.06	617.55	619.73	619.49	617.85	616.83	
MINIMUM	615.90	617.13	617.32	615.35	614.63	613.76	615.86	616.67	617.43	617.84	616.80	615.86	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	2597.14	2610.36	2609.48	2463.88	2387.72	2505.99	2628.87	2618.29	2800.85	2654.44	2563.48	2484.66	

FOSS RESERVOIR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	4.20	2.87	2.14	2.36	2.82	4.70	9.30	16.19	12.73	4.14	3.38	3.44	68.3
FY 2002	0.00	0.00	0.00	3.55	4.55	4.16	5.94	6.84	3.71	2.84	1.32	1.57	34.47
<u>RELEASES(1000AC.FT.)</u>													
AVG 1978 THRU 2002	3.22	1.47	1.55	2.90	2.78	3.24	4.33	5.93	8.59	4.50	3.04	1.96	43.5
FY 2002	0.31	0.30	0.31	0.31	0.28	0.31	0.30	0.31	0.30	0.31	0.31	0.30	3.6
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	1.89	1.03	0.70	0.58	0.79	1.38	2.16	3.80	3.09	1.95	2.36	2.43	22.16
FY 2002	0.35	1.10	0.03	0.19	0.88	0.19	2.38	2.44	2.16	3.45	1.73	2.37	17.27
DEVIATION	-1.54	0.07	-0.67	-0.39	0.09	-1.19	0.22	-1.36	-0.93	1.50	-0.63	-0.06	-4.89
<u>POOL ELEVATION</u>													
END OF MONTH	1639.48	1639.38	1639.39	1639.62	1639.97	1640.13	1640.61	1641.18	1641.09	1640.83	1640.25	1639.94	
MAXIMUM	1639.96	1639.50	1639.90	1639.62	1639.98	1640.14	1640.61	1641.18	1641.26	1641.10	1640.85	1640.25	
MINIMUM	1639.48	1639.38	1639.36	1639.39	1639.62	1639.96	1640.13	1640.61	1641.09	1640.77	1640.23	1639.94	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	161.46	160.83	160.89	162.34	164.55	165.58	168.69	172.42	171.82	170.12	166.36	164.36	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
RED RIVER BASIN

FORT COBB	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	2.55	2.57	2.95	2.47	2.64	3.76	3.77	5.35	5.78	5.63	4.53	2.95	44.9
FY 2002	0.87	0.00	0.00	3.53	2.96	3.50	5.08	3.25	7.07	1.99	1.03	1.51	30.79
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	1.05	1.60	1.54	1.93	1.85	3.33	2.49	3.50	8.65	1.86	0.73	0.68	29.2
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.67	0.00	0.00	0.00	3.7
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	2.41	1.52	1.20	0.94	1.15	1.77	2.57	4.58	3.78	2.23	2.47	3.02	27.65
FY 2002	0.86	0.33	0.10	1.06	1.03	1.31	3.58	2.10	4.53	2.49	1.43	2.81	21.63
DEVIATION	-1.55	-1.19	-1.10	0.12	-0.12	-0.46	1.01	-2.48	0.75	0.26	-1.04	-0.21	-6.02
<u>POOL ELEVATION</u>													
END OF MONTH	1340.18	1340.13	1340.25	1340.77	1341.06	1341.35	1342.15	1342.26	1342.31	1341.96	1341.19	1340.90	
MAXIMUM	1340.61	1340.29	1340.29	1340.79	1341.19	1341.36	1342.32	1342.26	1343.23	1342.42	1341.96	1341.19	
MINIMUM	1340.14	1340.11	1340.13	1340.23	1340.77	1341.03	1341.31	1342.08	1342.19	1341.95	1341.19	1340.90	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	67.20	67.03	67.45	69.30	70.34	71.42	74.42	74.84	75.04	73.68	70.82	69.76	

HUGO LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	63.67	113.42	154.35	149.43	181.36	208.78	246.07	253.69	120.54	43.56	19.04	49.99	1603.9
FY 2002	115.86	0.00	0.00	158.01	290.08	523.29	606.15	66.44	51.15	15.55	32.82	4.16	1863.52
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	55.30	129.61	179.98	172.76	173.64	226.02	229.22	223.81	159.48	56.43	41.90	28.97	1677.1
FY 2002	100.71	4.56	323.87	157.33	353.17	294.05	771.79	64.85	51.29	19.52	60.61	14.45	2216.2
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	3.82	3.75	3.14	2.73	3.09	3.83	4.69	5.87	4.16	3.36	3.01	4.31	45.75
FY 2002	4.11	2.44	6.38	3.82	2.71	7.81	7.88	3.19	3.80	3.95	1.66	1.60	49.35
DEVIATION	0.29	-1.31	3.24	1.09	-0.38	3.98	3.19	-2.68	-0.36	0.59	-1.35	-2.71	3.60
<u>POOL ELEVATION</u>													
END OF MONTH	405.50	406.26	409.37	409.38	404.63	417.78	408.27	407.98	407.45	406.66	404.08	402.87	
MAXIMUM	408.63	406.26	418.77	409.38	412.62	423.54	425.15	408.27	408.14	407.53	406.66	404.08	
MINIMUM	404.42	405.47	406.26	406.19	404.63	404.55	408.27	407.45	407.39	406.52	404.08	402.87	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	171.98	182.41	227.86	228.01	160.33	384.26	211.30	207.00	199.32	188.03	153.10	137.71	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
TULSA DISTRICT  
RED RIVER BASIN

MC GEE CREEK	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1938 THRU 2002	5.65	9.01	10.23	8.20	13.51	17.67	20.40	21.69	11.15	3.71	2.11	4.49	127.8
FY 2002	12.49	0.00	0.00	8.50	18.40	46.02	66.35	4.48	8.45	3.63	3.42	2.02	173.76
<u>RELEASES(1000AC.FT.)</u>													
AVG 1989 THRU 2002	2.99	13.11	21.55	17.62	15.04	27.21	23.18	28.48	17.58	4.58	3.11	3.54	178.0
FY 2002	8.96	0.82	19.54	4.41	20.40	15.41	86.21	7.46	0.83	0.85	0.85	0.82	166.6
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	2.50	2.07	1.55	2.19	2.86	3.37	4.69	5.55	4.12	3.18	2.84	4.32	39.24
FY 2002	3.90	1.91	4.43	2.46	1.62	5.99	7.86	3.12	4.26	4.89	2.32	1.55	44.31
DEVIATION	1.40	-0.16	2.88	0.27	-1.24	2.62	3.17	-2.43	0.14	1.71	-0.52	-2.77	5.07
<u>POOL ELEVATION</u>													
END OF MONTH	175.87	175.78	176.19	176.35	175.97	178.07	176.35	175.80	176.04	175.88	175.71	175.52	
MAXIMUM	176.50	175.87	177.43	176.35	176.50	178.79	179.98	176.35	176.10	176.05	175.88	175.71	
MINIMUM	175.75	175.77	175.75	175.93	175.91	175.90	176.35	175.76	175.76	175.88	175.71	175.52	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	113.58	112.49	117.64	119.73	114.80	143.26	119.73	112.74	115.68	113.71	111.64	109.34	

TOM STEED RESERVOIR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	2.24	0.72	0.75	0.60	0.85	1.77	1.93	6.89	4.94	1.29	1.10	2.20	25.3
FY 2002	0.00	0.00	0.00	0.74	1.15	1.28	5.81	0.42	0.73	0.67	0.14	1.06	12.01
<u>RELEASES(1000AC.FT.)</u>													
AVG 1981 THRU 2002	0.56	0.98	0.66	0.20	0.67	0.96	0.38	2.64	2.33	0.28	0.29	0.25	10.2
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<u>RAINFALL (INCHES)</u>													
AVG 1930 THRU 2002	2.48	1.36	1.11	0.95	1.15	1.69	2.32	4.38	3.39	2.23	2.29	2.83	26.19
FY 2002	0.18	1.80	0.07	1.98	0.74	1.34	3.47	1.43	2.10	2.89	0.34	1.30	17.64
DEVIATION	-2.30	0.44	-1.04	1.03	-0.41	-0.35	1.15	-2.95	-1.29	0.66	-1.95	-1.53	-8.55
<u>POOL ELEVATION</u>													
END OF MONTH	1407.16	1406.87	1406.50	1406.25	1406.09	1405.81	1406.50	1406.05	1405.43	1404.91	1404.02	1403.54	
MAXIMUM	1407.92	1407.16	1406.87	1406.50	1406.35	1406.09	1407.02	1406.50	1406.05	1405.51	1404.91	1404.02	
MINIMUM	1407.16	1406.87	1406.50	1406.18	1406.09	1405.81	1405.71	1406.00	1405.43	1404.91	1404.02	1403.54	
<u>POOL CONTENT-EOM</u>													
(1000AC.FT)	75.06	73.50	71.55	70.24	69.40	67.97	71.55	69.19	66.05	63.45	59.16	56.94	



SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
RED RIVER BASIN

<u>PAT MAYSE LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1938 THRU 2002	5.16	8.99	11.47	7.73	14.97	15.67	14.71	18.00	11.36	3.47	1.36	3.47	116.4
FY 2002	6.99	0.00	0.00	10.13	16.08	52.45	20.95	3.34	2.34	1.56	0.27	0.92	115.03
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	0.80	4.89	10.00	8.20	10.18	16.40	12.37	12.87	12.49	4.03	0.75	0.32	93.3
FY 2002	0.41	0.09	18.37	8.83	20.22	19.62	38.33	9.52	1.99	0.12	0.00	0.00	117.5
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.53	3.29	3.03	2.55	2.95	3.63	4.21	4.95	3.88	3.11	2.34	3.66	41.12
FY 2002	3.21	2.07	6.17	3.08	3.03	7.80	4.81	3.29	3.16	2.01	2.67	2.70	44.00
DEVIATION	-0.32	-1.22	3.14	0.53	0.08	4.17	0.60	-1.66	-0.72	-1.10	0.33	-0.96	2.88
<u>POOL ELEVATION</u>													
END OF MONTH	450.98	450.81	453.28	453.10	451.98	456.54	453.26	451.66	451.00	450.50	449.79	449.31	
MAXIMUM	451.32	451.03	456.13	453.28	454.66	458.11	457.11	453.26	451.82	451.12	450.50	449.79	
MINIMUM	450.18	450.65	450.79	451.60	451.98	451.40	453.26	451.66	450.97	450.50	449.79	449.31	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	117.99	117.00	132.27	131.11	124.05	154.11	132.14	122.11	118.11	115.19	111.08	108.35	
<u>PINE CREEK LAKE</u>													
	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1930 THRU 2002	30.83	52.38	70.77	66.28	84.04	91.79	94.51	109.76	44.25	17.12	8.67	22.44	692.8
FY 2002	28.07	0.00	0.00	133.26	92.88	241.04	187.04	41.89	28.31	4.38	2.68	1.15	760.70
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	31.50	65.80	88.45	76.46	75.77	103.74	82.61	105.65	64.71	18.58	13.59	20.12	747.0
FY 2002	25.94	5.98	139.33	98.24	167.08	114.35	279.11	50.72	25.22	11.32	5.75	5.60	928.6
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	3.94	3.80	3.43	2.96	3.23	4.01	4.69	5.84	4.02	3.59	3.15	4.31	46.96
FY 2002	3.90	2.75	7.63	4.05	3.36	8.68	7.48	3.77	3.32	3.56	1.24	1.59	51.33
DEVIATION	-0.04	-1.05	4.20	1.09	0.13	4.67	2.79	-2.07	-0.70	-0.03	-1.91	-2.72	4.37
<u>POOL ELEVATION</u>													
END OF MONTH	438.27	438.86	446.91	452.16	438.38	458.19	444.97	442.87	442.99	440.96	439.65	438.08	
MAXIMUM	442.05	438.90	459.07	452.16	455.51	464.06	465.61	444.97	444.35	443.16	440.96	439.65	
MINIMUM	437.71	438.25	438.35	438.17	438.12	438.38	444.97	442.47	442.61	440.96	439.65	438.08	
<u>POOL CONTENT-EOM</u> <u>(1000AC.FT)</u>													
	54.79	57.07	96.13	130.56	55.22	180.13	85.28	74.61	75.18	65.80	60.26	54.06	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

TULSA DISTRICT  
RED RIVER BASIN

<u>LAKE KEMP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1924 THRU 2002	21.72	6.72	6.96	4.33	7.22	9.61	12.87	35.93	27.81	13.98	16.75	23.86	187.8
FY 2002	0.50	0.00	0.00	2.40	2.61	9.41	22.67	11.15	19.98	65.69	6.18	3.87	144.46
<u>RELEASES(1000AC.FT.)</u>													
AVG 1976 THRU 2002	7.03	4.37	2.14	3.10	3.17	6.62	5.90	9.46	19.01	15.08	15.72	10.84	102.4
FY 2002	7.52	1.98	1.27	2.57	0.00	0.00	1.29	2.04	2.56	2.95	10.85	8.87	41.9
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.00	1.03	0.87	0.76	1.03	1.13	1.88	3.31	2.68	1.74	2.08	2.56	21.07
FY 2002	0.52	3.43	0.36	0.96	0.77	2.33	3.96	1.50	3.30	4.01	2.05	1.60	24.79
DEVIATION	-1.48	2.40	-0.51	0.20	-0.26	1.20	2.08	-1.81	0.62	2.27	-0.03	-0.96	3.72
<u>POOL ELEVATION</u>													
END OF MONTH	1129.43	1131.85	1132.23	1131.97	1132.00	1132.99	1135.25	1135.75	1136.91	1141.40	1140.37	1139.51	
MAXIMUM	1131.04	1131.85	1132.33	1132.30	1132.19	1132.99	1135.26	1135.81	1137.27	1141.40	1141.70	1403.82	
MINIMUM	1129.43	1129.13	1130.02	1131.94	1131.95	1131.86	1132.82	1134.89	1135.59	1136.91	1140.37	1139.35	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	116.82	132.83	135.53	133.65	133.86	141.06	159.50	164.02	175.20	229.85	215.86	204.77	
<u>WAURIKA LAKE</u>													
<u>INFLOWS(1000AC.FT.)</u>													
AVG 1926 THRU 2002	10.91	5.63	5.86	4.19	7.18	10.26	11.16	29.71	20.20	4.07	2.14	5.71	117.0
FY 2002	0.00	0.00	0.00	3.09	2.39	5.89	23.50	3.11	5.64	4.66	1.84	0.52	50.66
<u>RELEASES(1000AC.FT.)</u>													
AVG 1983 THRU 2002	5.84	12.21	7.22	10.36	9.87	21.60	15.45	21.73	28.34	6.77	3.90	5.48	148.8
FY 2002	0.00	0.00	0.00	0.00	0.00	0.00	5.12	0.00	0.00	0.00	0.00	0.00	5.1
<u>RAINFALL(INCHES)</u>													
AVG 1930 THRU 2002	2.96	1.85	1.52	1.29	1.47	2.05	2.68	4.84	3.57	2.22	2.29	3.20	29.95
FY 2002	0.87	0.70	1.11	0.76	0.80	1.76	3.00	0.72	3.00	3.99	1.86	1.77	20.34
DEVIATION	-2.09	-1.15	-0.41	-0.53	-0.67	-0.29	0.32	-4.12	-0.57	1.77	-0.43	-1.43	-9.61
<u>POOL ELEVATION</u>													
END OF MONTH	949.80	949.64	949.67	949.75	949.70	949.96	951.55	951.41	951.43	951.41	950.94	950.43	
MAXIMUM	950.39	949.96	949.81	949.93	950.06	950.09	951.78	951.69	951.75	951.62	951.41	950.94	
MINIMUM	949.78	949.61	949.57	949.62	949.70	949.64	949.87	951.32	951.35	951.26	950.93	950.43	
<u>POOL CONTENT-EOM</u> (1000AC.FT)													
	174.60	173.12	173.40	174.14	173.68	176.08	191.72	190.30	190.50	190.30	185.56	180.62	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
WHITE RIVER BASIN

BEAVER LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1968 thru 2002	42.4	111.7	116.9	94.6	119.7	188.4	179.6	129.1	87.2	24.4	15.1	28.1	1137.2
WY 2002	42.3	28.8	210.9	80.5	128.0	294.7	304.1	132.3	95.0	35.9	35.6	6.2	1394.3
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1968 thru 2002	34.9	51.0	85.6	88.6	100.8	106.8	134.7	112.3	96.1	83.3	84.2	53.8	1032.0
WY 2002	50.0	42.8	19.8	31.0	129.0	65.0	221.0	119.9	105.6	55.9	58.9	147.7	1046.8
<u>Basin Rainfall (inches)</u>													
Avg WY 1977 thru 2002	3.9	5.0	3.3	2.6	3.0	4.4	4.3	5.5	4.9	3.3	3.2	4.0	47.5
WY 2002	5.5	3.2	5.2	3.2	2.5	6.7	7.0	6.4	4.4	5.0	4.8	1.3	55.3
Deviation	1.6	-1.8	1.9	0.6	-0.5	2.3	2.7	1.0	-0.4	1.7	1.6	-2.7	7.8
<u>Pool Elevation</u>													
End of Month	1112.00	1111.24	1118.31	1119.93	1119.70	1127.24	1129.58	1129.61	1128.88	1127.77	1126.55	1121.37	
Maximum	1112.63	1112.25	1118.32	1119.93	1122.17	1127.26	1130.37	1130.03	1129.80	1128.93	1127.82	1126.62	
Minimum	1111.67	1111.13	1111.24	1117.76	1119.70	1119.69	1127.23	1129.25	1128.86	1127.62	1126.54	1121.36	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	1436.7	1417.5	1604.8	1649.9	1643.5	1865.5	1938.3	1939.3	1916.3	1881.7	1844.3	1691.1	

TABLE ROCK LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1961 thru 2002	98.5	230.8	280.5	243.2	295.5	422.1	442.3	384.9	255.9	143.3	111.5	108.0	3016.6
WY 2002	82.0	75.2	353.1	135.4	358.9	460.5	633.6	841.1	307.7	114.6	86.4	146.5	3594.9
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1961 thru 2002	117.3	173.8	263.8	248.4	241.7	344.3	375.2	331.7	228.9	223.8	182.4	126.2	2857.6
WY 2002	76.6	89.8	101.9	119.7	347.1	421.7	621.5	520.9	312.8	327.7	106.1	146.3	3192.1
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.4	4.3	3.2	2.3	2.6	3.9	4.0	5.1	4.5	3.4	3.3	3.9	43.9
WY 2002	4.5	3.3	4.9	2.7	1.9	4.5	4.9	10.1	4.1	3.7	2.8	1.3	48.6
Deviation	1.1	-1.0	1.6	0.4	-0.7	0.6	1.0	5.0	-0.4	0.2	-0.6	-2.6	4.7
<u>Pool Elevation</u>													
End of Month	909.45	908.84	914.73	914.90	914.95	915.54	915.45	922.15	921.61	916.38	915.43	915.04	
Maximum	910.51	909.78	914.96	914.90	916.02	917.23	920.22	922.20	923.66	921.62	916.41	915.44	
Minimum	909.45	908.78	908.66	913.82	914.81	914.80	915.20	915.40	921.61	916.35	915.41	913.36	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	2471.0	2446.6	2690.4	2697.7	2699.9	2725.4	2721.1	3023.1	2997.9	2761.9	2720.4	2703.7	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

LITTLE ROCK DISTRICT

WHITE RIVER BASIN

<u>BULL SHOALS LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1953 thru 2002	156.6	287.2	382.6	337.7	376.9	568.2	590.9	561.4	354.7	272.7	209.6	170.9	4269.4
WY 2002	93.0	145.6	403.2	237.7	474.6	770.6	999.6	1042.7	412.7	354.4	137.1	134.2	5205.3
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1953 thru 2002	232.1	194.0	318.8	350.6	350.9	420.4	421.0	370.1	341.3	429.9	378.0	257.1	4064.1
WY 2002	74.1	112.7	177.0	157.6	546.7	287.0	351.4	225.7	424.3	655.5	785.5	809.5	4606.9
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.2	4.4	3.2	2.3	2.7	3.9	3.7	4.7	4.0	3.2	2.9	3.4	41.7
WY 2002	3.3	3.2	5.2	2.8	2.3	5.4	5.1	7.8	3.5	4.0	4.6	1.8	48.8
Deviation	0.2	-1.3	2.0	0.5	-0.4	1.4	1.3	3.1	-0.5	0.8	1.7	-1.6	7.0
<u>Pool Elevation</u>													
End of Month	648.31	648.73	653.58	655.05	653.14	662.92	674.57	687.40	686.75	681.46	669.72	655.78	
Maximum	648.97	648.74	654.57	655.05	657.21	662.92	674.61	687.42	688.84	686.79	681.46	669.66	
Minimum	647.84	647.69	648.71	652.93	653.10	653.08	661.27	674.59	686.73	681.46	669.71	655.75	
<u>Pool Content EOM</u> (1,000 AC. FT.)	2797.3	2815.4	3029.1	3095.8	3009.3	3474.0	4098.8	4887.7	4845.1	4508.8	3827.9	3129.0	

<u>NORFORK LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1946 thru 2002	52.3	104.4	121.5	123.5	138.5	193.8	202.0	193.0	103.7	70.6	48.1	51.9	1403.2
WY 2002	22.6	31.0	133.0	98.4	108.6	387.4	311.3	479.4	85.7	58.3	98.4	21.9	1835.9
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1946 thru 2002	68.6	63.5	113.2	124.4	124.6	135.9	139.1	116.4	118.0	121.1	107.8	83.9	1316.6
WY 2002	20.2	18.5	24.5	12.6	117.4	145.3	150.6	167.9	244.2	170.9	238.8	199.2	1510.2
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.3	4.4	3.4	2.5	3.0	4.1	3.9	4.9	3.7	3.2	2.8	3.4	42.6
WY 2002	2.5	3.5	4.5	2.9	2.7	8.3	4.0	8.7	3.0	3.8	5.6	1.4	50.9
Deviation	-0.8	-0.9	1.1	0.4	-0.3	4.2	0.1	3.7	-0.7	0.7	2.8	-2.0	8.3
<u>Pool Elevation</u>													
End of Month	543.35	543.69	548.78	552.51	551.85	561.89	567.76	578.34	572.46	567.82	561.82	553.89	
Maximum	543.65	543.69	548.78	552.51	554.17	561.89	567.96	578.46	578.36	572.47	567.84	561.82	
Minimum	543.32	543.15	543.71	548.78	551.84	551.64	560.05	566.00	572.46	567.82	561.82	553.89	
<u>Pool Content EOM</u> (1,000 AC. FT.)	1071.1	1077.8	1181.7	1262.4	1247.9	1482.2	1632.8	1932.5	1761.2	1634.4	1480.4	1293.2	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
WHITE RIVER BASIN

<u>CLEARWATER LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1949 thru 2002	22.5	54.2	62.2	57.5	60.1	88.8	98.6	85.2	40.6	28.1	20.5	20.9	639.3
WY 2002	13.9	14.8	89.5	25.7	71.9	158.4	139.2	440.9	56.6	42.8	21.5	16.3	1091.4
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1949 thru 2002	24.9	33.3	62.1	64.1	63.1	80.4	82.7	77.3	56.2	36.4	26.3	25.0	632.0
WY 2002	12.9	22.2	92.0	23.7	74.2	106.7	146.8	134.0	221.6	210.1	21.1	15.8	1081.1
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.4	5.2	3.6	2.6	2.9	3.9	4.3	4.5	3.9	3.8	3.4	3.4	44.9
WY 2002	1.9	1.9	2.7	1.6	3.1	4.2	4.6	6.5	1.3	1.7	2.6	1.2	33.3
Deviation	-1.5	-3.3	-1.0	-1.0	0.2	0.3	0.3	2.0	-2.6	-2.2	-0.8	-2.2	-11.6
<u>Pool Elevation</u>													
End of Month	500.30	496.25	494.70	495.78	494.31	515.15	512.63	562.62	541.53	500.35	500.17	500.11	
Maximum	500.62	500.30	511.68	495.78	506.24	520.00	515.11	567.60	562.59	541.49	501.11	500.41	
Minimum	499.98	494.35	494.32	494.25	494.15	494.25	502.90	506.44	541.53	500.35	500.16	500.11	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	33.4	25.7	23.1	24.9	22.4	73.6	65.3	370.1	202.4	33.5	33.1	33.0	
<u>GREERS FERRY LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1965 thru 2002	38.8	116.0	173.5	130.6	155.0	225.4	207.6	132.9	50.5	10.7	6.3	19.2	1266.3
WY 2002	3.3	27.1	301.9	137.6	152.0	485.2	187.2	48.6	29.2	15.8	9.2	0.7	1397.7
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1965 thru 2002	35.8	35.0	87.3	132.3	135.9	147.2	137.0	120.7	94.7	97.3	79.6	45.7	1148.5
WY 2002	8.7	7.5	91.7	114.7	188.9	123.2	106.2	102.1	147.3	178.9	74.8	37.5	1181.4
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	4.0	5.7	4.4	3.3	3.7	4.7	4.8	5.2	3.9	3.3	2.7	3.7	49.5
WY 2002	2.9	4.6	7.1	3.9	3.2	10.2	3.9	4.7	2.8	5.4	3.3	2.5	54.5
Deviation	-1.1	-1.2	2.7	0.6	-0.5	5.4	-0.8	-0.5	-1.0	2.0	0.6	-1.2	4.9
<u>Pool Elevation</u>													
End of Month	454.74	455.21	461.93	462.51	461.17	471.79	473.76	471.91	468.11	462.71	460.19	458.54	
Maximum	455.16	455.21	463.45	462.51	463.61	471.79	474.07	473.80	471.94	468.13	462.75	460.21	
Minimum	454.72	454.40	455.20	459.83	461.13	461.09	471.81	471.89	468.09	462.71	460.17	458.47	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	1719.2	1733.3	1939.8	1958.3	1915.9	2269.7	2339.5	2273.9	2142.7	1964.7	1885.0	1833.7	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
ARKANSAS RIVER BASIN

<u>JAMES W. TRIMBLE (L&amp;D 13)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1971 thru 2002	1597.9	2282.6	2302.1	2035.1	2006.6	3677.9	3503.5	3998.9	3662.1	1981.3	991.5	879.1	28918.6
WY 2002	797.3	465.4	1220.7	622.4	1551.1	2052.5	3235.1	3541.5	3287.2	1266.0	708.8	367.5	19115.3
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.4	4.7	3.4	2.4	3.0	4.0	3.8	5.1	3.7	3.3	2.2	2.9	42.0
WY 2002	2.6	2.7	5.5	2.5	2.0	8.9	5.1	3.7	0.4	2.5	3.5	0.7	40.0
Deviation	-0.8	-2.0	2.1	0.0	-1.1	4.9	1.3	-1.5	-3.3	-0.8	1.3	-2.2	-2.0
<u>Pool Elevation</u>													
End of Month	391.73	391.72	391.70	391.16	392.08	391.94	391.39	391.42	391.38	391.60	391.88	391.96	
Maximum	392.33	392.23	392.41	392.42	392.20	392.22	392.45	392.33	392.10	392.45	392.28	392.28	
Minimum	390.85	390.99	389.16	391.01	389.88	388.06	388.45	388.92	389.64	390.60	391.06	390.87	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	57.3	57.3	57.1	53.6	59.7	58.7	55.1	55.3	55.0	56.5	58.3	58.8	

<u>OZARK-JETTA TAYLOR (L&amp;D 12)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1972 thru 2002	1642.2	2489.8	2579.0	2187.3	2235.8	4063.2	3860.4	4245.9	3860.7	2092.1	1047.7	912.4	31216.6
WY 2002	896.9	511.5	1517.0	722.8	1867.7	2841.8	4115.9	3983.3	3455.1	1334.7	770.0	363.6	22380.3
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.5	4.8	3.7	2.5	2.8	3.8	3.4	5.3	4.1	2.9	2.2	2.9	41.9
WY 2002	3.5	4.9	6.9	3.0	3.0	9.6	6.0	6.0	1.2	2.5	3.1	1.2	50.9
Deviation	0.0	0.2	3.3	0.5	0.2	5.8	2.6	0.7	-2.9	-0.4	0.9	-1.8	9.1
<u>Pool Elevation</u>													
End of Month	372.43	372.10	372.46	371.73	371.33	372.18	371.58	370.17	372.40	371.81	371.42	371.93	
Maximum	372.74	372.51	372.74	372.64	372.59	372.48	372.49	372.50	372.50	372.74	372.64	372.21	
Minimum	370.17	370.51	370.73	370.45	370.72	370.91	370.98	369.64	370.05	370.15	370.48	370.43	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	153.4	149.6	153.8	145.8	141.9	150.5	144.3	130.6	153.1	146.6	142.8	147.7	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

LITTLE ROCK DISTRICT

ARKANSAS RIVER BASIN

<u>DARDANELLE (L&amp;D 10)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1966 thru 2002	1661.3	2538.9	2667.2	2330.6	2353.0	4151.7	3891.9	4180.4	3775.5	2008.9	989.4	902.9	31451.9
WY 2002	787.4	486.4	1790.8	891.2	2028.0	3473.0	4064.1	3815.1	3353.8	1302.9	713.0	307.9	23013.5
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.9	4.9	4.0	2.6	3.1	3.9	4.1	5.4	3.3	2.9	2.1	2.9	43.3
WY 2002	4.6	4.2	7.5	3.2	3.2	8.8	4.2	2.8	3.0	4.6	3.8	1.4	51.3
Deviation	0.7	-0.6	3.4	0.6	0.0	4.9	0.1	-2.7	-0.3	1.6	1.7	-1.5	8.0
<u>Pool Elevation</u>													
End of Month	338.04	337.91	337.97	338.47	337.95	337.64	338.08	337.54	338.05	337.94	337.71	337.70	
Maximum	338.37	338.64	338.63	338.77	338.72	338.84	338.22	338.56	338.35	338.51	338.33	338.07	
Minimum	337.03	337.19	336.43	337.40	337.28	337.34	336.88	336.82	337.44	337.45	337.32	337.15	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	487.6	483.2	485.2	502.7	484.5	474.1	489.0	470.8	488.0	484.2	476.5	476.2	

<u>BLUE MOUNTAIN LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1948 thru 2002	11.0	29.0	43.6	44.2	51.0	64.9	56.6	56.1	17.0	9.1	4.0	4.1	390.7
WY 2002	7.4	2.0	138.6	84.3	83.0	201.9	106.0	41.5	10.9	2.5	2.3	0.3	680.8
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1948 thru 2002	5.7	17.1	43.3	45.8	45.7	51.3	49.3	54.0	34.9	16.4	8.9	5.5	378.0
WY 2002	11.6	0.7	80.7	89.9	128.0	69.5	137.2	121.7	25.0	4.3	3.6	1.1	673.3
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	4.1	5.1	4.5	3.3	3.4	4.3	4.4	6.3	4.0	3.6	2.7	3.7	49.5
WY 2002	3.9	3.1	8.9	4.6	3.6	9.6	5.8	5.3	1.8	5.1	3.3	2.0	56.9
Deviation	-0.3	-1.9	4.4	1.3	0.1	5.2	1.4	-1.0	-2.3	1.5	0.6	-1.7	7.3
<u>Pool Elevation</u>													
End of Month	384.16	384.52	398.34	397.28	386.54	409.42	405.40	391.22	387.06	386.20	385.42	384.90	
Maximum	386.50	384.52	407.26	398.30	405.04	410.88	414.88	405.38	391.20	387.18	386.20	385.42	
Minimum	384.16	384.08	384.22	384.28	386.54	386.14	405.40	388.96	387.02	386.18	385.42	384.90	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	25.1	26.2	83.8	78.0	32.6	164.1	131.2	49.7	34.3	31.4	29.0	27.4	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
ARKANSAS RIVER BASIN

<u>ARTHUR V. ORMOND (L&amp;D 9)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1697.7	2571.9	2833.6	2425.2	2403.4	4222.4	4010.6	4405.9	3843.6	2030.3	1013.0	918.4	32376.1
WY 2002	805.7	507.1	2061.3	987.4	2369.5	3790.4	4283.4	3983.3	3447.9	1374.3	752.2	335.3	24697.9
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.5	5.0	4.2	2.6	3.2	3.9	4.0	4.6	3.3	2.6	2.2	2.7	41.7
WY 2002	2.5	5.0	6.5	3.4	3.2	8.6	2.6	1.9	1.4	1.7	2.6	1.5	41.0
Deviation	-1.0	-0.1	2.3	0.8	0.1	4.7	-1.4	-2.7	-1.8	-0.9	0.3	-1.1	-0.7
<u>Pool Elevation</u>													
End of Month	286.27	285.58	285.65	284.91	286.86	285.79	286.18	284.93	286.20	285.84	286.51	286.25	
Maximum	287.17	287.01	289.67	287.47	287.61	292.25	290.92	287.29	286.94	287.11	287.67	286.97	
Minimum	283.99	283.98	283.92	283.86	284.03	282.79	283.40	284.06	284.29	284.09	284.07	284.04	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	60.6	56.9	57.3	53.4	63.8	58.0	60.1	53.5	60.2	58.3	61.9	60.5	

<u>TOAD SUCK FERRY (L&amp;D 8)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1676.7	2625.9	2966.8	2588.3	2568.9	4429.0	4193.6	4452.7	3898.3	2033.5	992.8	897.3	33323.7
WY 2002	741.2	475.0	2296.3	1018.9	2440.2	3925.2	4302.6	3796.5	3389.8	1372.5	724.7	301.0	24783.8
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.4	4.9	4.1	2.4	3.0	3.6	4.1	4.3	3.3	2.6	2.2	2.6	40.5
WY 2002	2.2	3.6	4.7	3.7	3.2	5.9	2.5	2.4	1.8	2.0	2.6	1.6	36.3
Deviation	-1.2	-1.3	0.6	1.3	0.2	2.3	-1.6	-1.9	-1.5	-0.6	0.5	-0.9	-4.2
<u>Pool Elevation</u>													
End of Month	265.41	265.60	264.89	265.18	265.25	264.88	264.99	264.48	265.21	265.21	265.13	265.31	
Maximum	265.75	265.86	273.42	265.68	269.59	275.71	274.09	266.97	265.41	265.59	265.56	265.49	
Minimum	264.66	264.56	263.96	263.56	263.96	263.66	263.76	263.65	264.00	264.66	264.76	264.83	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	34.8	35.6	32.6	33.8	34.1	32.5	33.0	30.9	33.9	33.9	33.6	34.3	



SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

LITTLE ROCK DISTRICT

ARKANSAS RIVER BASIN

<u>NIMROD LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1944 thru 2002	19.1	47.9	80.6	71.8	87.8	116.5	91.6	92.8	36.3	11.2	4.2	6.6	666.5
WY 2002	10.1	9.4	259.6	64.6	128.6	230.9	128.5	65.3	12.6	4.3	1.9	0.8	916.4
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1944 thru 2002	10.7	34.2	76.6	76.6	76.8	104.9	90.2	91.6	54.5	24.0	8.5	8.1	656.8
WY 2002	10.4	2.1	169.3	143.4	145.6	101.7	238.2	48.2	33.9	6.6	4.4	1.1	905.2
<u>Basin Rainfall (inches)</u>													
Avg WY 1978 thru 2002	4.4	5.4	5.0	3.3	3.6	4.5	4.6	6.5	4.5	3.8	2.8	3.7	52.1
WY 2002	3.4	4.0	9.6	4.3	3.3	8.5	5.4	5.7	2.0	4.1	2.9	2.2	55.3
Deviation	-1.0	-1.4	4.6	0.9	-0.3	4.0	0.8	-0.8	-2.5	0.3	0.2	-1.5	3.2
<u>Pool Elevation</u>													
End of Month	342.21	343.98	357.42	346.27	342.22	360.59	346.14	349.05	344.63	343.74	342.80	342.42	
Maximum	344.09	343.98	366.29	357.37	356.33	363.91	362.00	349.19	349.04	344.63	343.75	342.81	
Minimum	342.20	342.10	342.61	342.41	342.19	342.21	346.14	345.21	344.63	343.73	342.79	342.42	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	29.8	36.7	126.4	47.3	29.8	157.9	46.7	62.5	39.5	35.7	31.8	30.5	

<u>MURRAY (L&amp;D 7)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1705.8	2732.7	3181.2	2754.0	2710.9	4615.0	4541.5	4745.3	4029.7	2078.2	982.6	900.4	34977.2
WY 2002	734.0	458.4	2668.9	1218.5	2837.8	4500.7	4658.3	3939.4	3516.9	1426.2	695.3	261.9	26916.2
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.3	5.2	4.2	2.7	3.4	4.4	4.2	4.6	2.9	2.8	2.3	2.9	42.7
WY 2002	5.8	5.9	7.3	3.7	3.4	9.1	1.6	4.2	1.3	1.8	1.6	4.1	49.9
Deviation	2.6	0.6	3.2	1.0	0.0	4.7	-2.6	-0.4	-1.6	-1.0	-0.6	1.2	7.2
<u>Pool Elevation</u>													
End of Month	249.07	249.31	249.33	248.78	248.95	248.52	249.28	248.95	249.27	250.03	249.85	249.26	
Maximum	249.49	249.51	250.35	249.58	249.58	249.73	249.39	249.40	249.49	250.23	250.26	250.10	
Minimum	248.95	249.07	247.05	248.42	247.21	247.06	246.88	247.05	248.15	249.02	249.65	249.05	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	87.8	90.3	90.5	85.1	86.6	82.7	90.0	86.6	89.9	97.7	95.9	89.8	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

LITTLE ROCK DISTRICT

ARKANSAS RIVER BASIN

<u>DAVID D. TERRY (L&amp;D 6)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1968 thru 2002	1704.5	2722.7	3260.4	2789.3	2798.2	4638.4	4507.2	4790.9	4063.2	2117.6	1009.8	889.1	35291.3
WY 2002	840.4	516.8	2750.1	1181.1	2863.1	4553.4	4741.2	3978.0	3350.1	1227.5	607.2	228.8	26837.6
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.4	4.3	3.7	2.8	2.8	3.8	3.8	4.2	2.6	2.7	1.7	2.4	38.3
WY 2002	5.9	5.6	6.8	2.5	3.0	8.8	1.2	2.3	1.2	3.3	1.1	1.1	42.7
Deviation	2.4	1.3	3.1	-0.3	0.2	5.0	-2.6	-1.9	-1.4	0.6	-0.6	-1.4	4.5
<u>Pool Elevation</u>													
End of Month	231.46	231.38	230.88	230.37	231.12	230.78	230.94	230.53	231.05	231.24	231.48	231.21	
Maximum	231.65	231.57	231.74	231.78	231.49	233.79	231.93	231.48	231.34	231.60	231.63	231.77	
Minimum	230.77	230.80	229.85	229.41	230.14	229.92	229.92	229.92	230.05	230.48	230.55	230.90	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	51.6	51.2	49.0	47.1	50.1	48.6	49.3	47.7	49.7	50.6	51.7	50.4	

<u>LOCK AND DAM NO. 5</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1761.3	2776.8	3242.2	2808.8	2772.6	4650.5	4544.3	4834.7	4101.5	2119.3	1014.6	925.0	35551.7
WY 2002	821.1	531.6	2824.4	1212.3	2910.3	4574.9	4726.8	3990.6	3380.3	1280.1	673.8	232.8	27159.0
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.8	4.3	4.7	3.3	3.2	4.2	4.2	5.0	3.0	3.2	2.4	3.3	44.4
WY 2002	6.2	4.8	7.4	2.8	2.7	11.0	0.9	6.5	1.4	3.0	3.2	2.7	52.4
Deviation	2.4	0.5	2.7	-0.6	-0.5	6.8	-3.3	1.5	-1.6	-0.1	0.8	-0.6	8.0
<u>Pool Elevation</u>													
End of Month	213.23	213.36	212.82	212.15	213.17	212.25	213.26	213.69	213.74	213.82	213.88	213.39	
Maximum	213.51	213.50	213.57	213.44	213.73	214.25	213.32	214.21	214.18	214.15	214.30	214.21	
Minimum	212.79	212.86	210.95	212.15	211.81	210.98	210.84	212.10	213.20	213.42	213.54	213.34	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	63.0	63.9	60.1	55.9	62.5	56.5	63.2	66.3	66.6	67.2	67.6	64.1	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

LITTLE ROCK DISTRICT

ARKANSAS RIVER BASIN

<u>EMMETT SANDERS (L&amp;D 4)</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1761.9	2791.3	3269.1	2823.8	2790.6	4740.2	4685.6	4961.5	4206.2	2125.4	1002.3	920.5	36078.4
WY 2002	798.3	500.4	2836.4	1196.4	2933.9	4570.7	4658.1	4014.9	3399.7	1273.4	690.5	244.6	27117.3
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.6	4.7	5.1	3.3	3.6	4.5	4.2	4.6	3.4	3.0	2.2	2.5	44.9
WY 2002	8.0	5.8	8.6	2.2	1.9	11.3	0.6	4.9	0.1	0.5	1.6	1.7	47.3
Deviation	4.4	1.0	3.5	-1.1	-1.7	6.8	-3.6	0.4	-3.2	-2.5	-0.6	-0.8	2.5
<u>Pool Elevation</u>													
End of Month	196.22	196.33	196.10	195.77	196.42	195.31	196.09	195.58	196.27	196.11	196.20	196.31	
Maximum	196.56	196.69	197.61	196.63	196.59	198.80	197.84	196.48	196.27	196.50	196.83	196.50	
Minimum	195.87	195.92	194.49	195.58	193.94	194.26	194.27	194.96	195.20	195.76	195.78	195.84	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	71.9	72.6	71.1	69.2	73.2	66.7	71.0	68.1	72.2	71.1	71.7	72.4	

<u>LOCK AND DAM NO. 3</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1759.9	2815.3	3319.5	2853.9	2814.9	4785.2	4773.4	5066.6	4290.5	2148.7	990.2	907.1	36525.2
WY 2002	823.2	497.3	2953.3	1195.0	2991.9	4743.4	4857.5	4056.9	3443.3	1316.0	711.4	257.8	27847.0
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.7	4.6	4.5	3.5	3.6	4.4	4.5	4.6	3.1	2.5	1.7	2.4	43.2
WY 2002	8.9	5.1	7.1	2.1	2.1	10.4	0.6	13.1	0.4	2.6	3.2	2.4	58.1
Deviation	5.2	0.5	2.6	-1.4	-1.4	6.0	-3.9	8.5	-2.7	0.1	1.5	0.0	14.9
<u>Pool Elevation</u>													
End of Month	182.03	182.55	182.01	181.77	182.34	181.58	182.07	181.54	181.66	182.15	182.09	182.19	
Maximum	183.14	182.73	185.18	182.80	182.45	185.98	185.23	182.45	182.35	182.50	183.02	182.63	
Minimum	181.25	181.88	180.40	181.37	180.05	179.97	180.27	180.51	181.22	181.46	181.64	181.71	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	46.5	48.6	46.4	45.5	47.7	44.8	46.7	44.6	45.1	47.0	46.8	47.2	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
ARKANSAS RIVER BASIN

WILBUR D. MILLS DAM (L&D 2)	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1970 thru 2002	1708.4	2843.4	3464.4	2953.9	2895.2	4934.8	4976.6	5130.7	4318.0	2166.6	997.7	913.9	37303.6
WY 2002	1006.0	594.0	3404.3	1637.0	3270.7	5080.3	5472.1	4373.1	3641.2	1402.2	794.6	292.9	30968.4
<u>Project Rainfall (inches)</u>													
Avg WY 1978 thru 2002	3.9	5.0	4.7	3.7	4.0	4.6	4.1	4.2	3.1	2.8	1.9	2.5	44.5
WY 2002	8.8	7.9	8.7	3.4	2.1	10.7	0.4	7.0	0.4	0.4	2.6	1.5	53.9
Deviation	4.8	3.0	4.0	-0.3	-1.9	6.0	-3.7	2.8	-2.7	-2.4	0.7	-1.1	9.3
<u>Pool Elevation</u>													
End of Month	161.93	161.94	162.00	161.36	162.03	161.39	162.50	161.80	162.52	162.52	162.58	162.10	
Maximum	162.89	162.35	162.23	162.84	162.21	162.13	162.50	163.05	162.94	163.10	162.93	162.90	
Minimum	161.72	161.78	160.25	161.36	160.38	160.43	160.11	160.92	161.30	162.43	162.48	162.10	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	109.4	109.5	110.1	103.3	110.4	103.6	115.7	108.0	115.9	115.9	116.5	111.2	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
RED RIVER BASIN

<u>DEQUEEN LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1979 thru 2002	16.0	24.3	34.4	21.6	27.6	31.0	23.4	27.0	13.0	8.9	2.1	4.9	234.4
WY 2002	7.6	2.8	57.3	21.7	24.2	47.6	30.1	22.3	3.0	1.5	1.2	2.2	221.5
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1979 thru 2002	9.6	20.0	36.4	24.6	23.4	31.3	23.7	24.2	17.5	9.5	3.6	4.6	228.5
WY 2002	0.7	1.0	45.6	25.1	33.1	31.0	44.5	21.0	5.6	1.9	1.9	1.4	212.9
<u>Basin Rainfall (inches)</u>													
Avg WY 1980 thru 2002	5.8	5.7	5.5	3.5	4.0	5.2	5.1	6.8	5.1	4.6	2.8	4.9	59.0
WY 2002	5.8	4.3	9.3	4.3	3.2	8.5	4.9	7.1	1.9	3.7	2.3	3.5	58.8
Deviation	-0.0	-1.4	3.8	0.8	-0.8	3.3	-0.2	0.3	-3.2	-0.9	-0.5	-1.4	-0.3
<u>Pool Elevation</u>													
End of Month	436.92	437.88	443.98	442.27	437.30	445.78	438.16	438.64	436.77	436.18	435.40	435.58	
Maximum	437.14	437.88	456.82	443.92	443.91	450.85	447.30	441.37	438.61	436.85	436.17	435.79	
Minimum	432.25	436.27	437.38	437.38	437.07	437.21	437.23	437.26	436.76	436.17	435.40	434.86	
<u>Pool Content EOM</u> (1,000 AC. FT.)	34.8	36.4	47.9	44.5	35.4	51.7	36.9	37.7	34.5	33.5	32.3	32.6	

<u>GILLHAM LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1976 thru 2002	21.8	38.5	55.5	36.3	44.5	60.2	42.9	41.6	20.6	14.8	3.2	6.7	386.4
WY 2002	13.3	9.8	97.9	32.4	42.4	72.8	52.6	39.2	22.1	1.4	0.6	2.0	386.6
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1976 thru 2002	13.6	32.7	56.2	40.9	38.9	57.8	48.0	38.3	25.5	15.5	6.8	5.8	380.0
WY 2002	12.9	4.5	85.6	39.1	52.5	54.9	67.8	22.9	27.0	3.3	3.2	2.6	376.3
<u>Basin Rainfall (inches)</u>													
Avg WY 1980 thru 2002	5.5	5.8	5.5	3.5	4.1	5.2	4.9	6.7	5.0	4.8	2.7	4.8	58.5
WY 2002	5.7	4.1	9.1	4.2	3.2	8.9	5.2	7.1	2.5	3.7	2.2	2.9	58.8
Deviation	0.2	-1.7	3.6	0.6	-0.9	3.7	0.4	0.4	-2.5	-1.1	-0.5	-1.9	0.3
<u>Pool Elevation</u>													
End of Month	502.26	505.87	513.31	509.28	502.43	513.62	503.93	513.83	502.18	500.45	498.07	497.30	
Maximum	508.33	505.96	535.73	513.19	511.85	521.97	515.82	513.99	513.80	502.31	500.45	498.06	
Minimum	501.94	502.17	502.61	502.62	501.98	502.41	502.14	502.50	502.17	500.45	498.07	496.65	
<u>Pool Content EOM</u> (1,000 AC. FT.)	33.4	38.6	50.8	43.9	33.6	51.3	35.7	51.7	33.3	31.0	27.9	27.0	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
LITTLE ROCK DISTRICT  
RED RIVER BASIN

<u>DIERKS LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1976 thru 2002	6.4	11.5	21.2	13.9	16.3	22.5	14.6	14.4	8.1	5.1	0.9	1.8	136.8
WY 2002	8.4	2.8	35.5	11.7	13.2	33.0	19.7	15.3	3.6	2.4	0.4	0.1	146.0
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1976 thru 2002	5.6	7.5	18.3	17.6	14.0	20.4	16.5	13.5	9.1	6.1	2.0	1.3	132.0
WY 2002	5.6	0.7	26.8	20.5	14.1	21.3	30.1	10.3	8.7	2.0	1.1	0.9	142.0
<u>Basin Rainfall (inches)</u>													
Avg WY 1980 thru 2002	5.7	5.6	5.8	3.7	4.3	5.4	4.8	6.5	4.8	4.7	2.7	4.5	58.4
WY 2002	6.7	4.2	8.0	3.1	2.5	9.5	4.3	7.4	3.0	5.1	2.2	2.2	58.1
Deviation	1.0	-1.4	2.2	-0.6	-1.8	4.1	-0.5	1.0	-1.8	0.4	-0.5	-2.4	-0.2
<u>Pool Elevation</u>													
End of Month	525.72	527.18	532.76	527.00	526.27	533.73	526.79	529.91	526.05	525.99	525.06	523.99	
Maximum	528.19	527.18	540.73	532.75	527.64	533.73	534.26	529.91	530.09	527.02	526.01	525.05	
Minimum	523.55	525.38	526.52	526.35	526.12	526.22	526.30	526.12	526.04	525.81	525.06	523.99	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	29.3	31.3	39.9	31.0	30.0	41.5	30.7	35.3	29.7	29.6	28.4	27.0	

<u>MILLWOOD LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflows (1,000 AC. FT.)</u>													
Avg WY 1973 thru 2002	196.7	404.2	627.2	467.3	504.3	691.6	543.8	550.0	393.1	174.3	88.3	105.4	4746.2
WY 2002	148.5	67.2	1017.2	472.3	695.0	858.2	1124.9	340.2	218.4	68.7	61.6	38.6	5110.9
<u>Releases (1,000 AC. FT.)</u>													
Avg WY 1967 thru 2002	157.3	336.3	576.8	458.9	480.3	627.3	511.2	559.1	380.4	151.9	74.0	115.3	4428.7
WY 2002	136.4	50.0	1000.5	497.1	704.7	733.2	1237.7	314.8	217.9	63.6	58.3	23.6	5037.8
<u>Basin Rainfall (inches)</u>													
Avg WY 1980 thru 2002	5.1	5.1	5.1	3.2	3.9	4.9	4.5	6.2	4.6	4.0	2.7	4.2	53.5
WY 2002	5.2	3.6	8.2	3.2	2.9	8.5	4.6	5.8	1.9	2.9	1.6	2.6	50.9
Deviation	0.1	-1.5	3.1	0.0	-1.0	3.6	0.1	-0.4	-2.7	-1.1	-1.1	-1.6	-2.6
<u>Pool Elevation</u>													
End of Month	259.59	260.08	260.54	259.69	259.27	262.92	259.29	259.89	259.51	259.32	259.07	259.29	
Maximum	261.45	260.08	265.69	260.56	260.70	265.83	263.71	260.49	261.70	259.71	259.66	259.35	
Minimum	259.21	259.21	259.35	259.46	259.27	259.28	259.19	259.18	259.31	259.30	259.04	259.00	
<u>Pool Content EOM</u>													
(1,000 AC. FT.)	216.8	231.6	246.3	219.8	207.2	328.1	207.8	225.7	214.4	208.7	201.3	207.8	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

FORT WORTH DISTRICT

RED RIVER BASIN

COOPER LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1991-2002	25.2	48.7	84.5	38.9	55.0	56.3	41.1	43.4	26.2	15.0	5.0	6.9	446.3
WY2002	13.1	5.3	169.9	36.5	40.1	91.7	79.4	15.3	0.0	0.0	0.0	0.0	451.3
<u>Release (1000 AF)</u>													
Avg 1991-2002	5.5	25.5	58.4	44.5	40.1	68.5	46.3	27.0	15.6	7.9	3.9	0.8	344.1
WY2002	5.9	1.1	89.3	82.1	62.1	49.8	106.6	12.8	0.5	0.7	0.3	0.2	411.6
<u>Rainfall (inches)</u>													
Avg 1991-2002	4.18	5.24	4.71	3.92	3.31	4.08	3.92	4.67	3.06	2.43	1.92	3.67	45.10
WY2002	2.98	3.16	9.53	4.71	2.50	6.47	5.86	3.90	0.86	3.20	3.20	1.67	48.05
Deviation	-1.20	-2.07	4.82	0.79	-0.81	2.39	1.95	-0.77	-2.20	0.77	1.28	-2.00	2.95
<u>Pool Elevation</u>													
End of month	439.82	439.81	443.60	441.25	439.98	441.92	440.27	440.02	439.41	438.86	438.12	437.60	
Maximum	440.28	439.83	446.88	443.34	441.92	442.97	442.01	440.41	440.01	439.51	438.83	438.09	
Minimum	439.61	439.72	439.78	440.15	439.98	439.85	440.27	440.02	439.40	438.86	438.12	437.60	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	306.85	306.46	383.42	334.67	309.93	348.39	315.35	310.70	298.85	288.74	275.04	265.94	

RED RIVER BASIN

WRIGHT PATMAN LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1957-2002	66.3	176.9	320.1	210.8	281.2	354.3	291.2	359.3	177.7	68.9	25.8	31.7	2364.2
WY2002	193.2	31.6	1010.4	223.0	383.3	490.0	703.1	141.9	4.8	13.5	0.0	6.6	3201.4
<u>Release (1000 AF)</u>													
Avg 1956-2002	95.3	159.1	259.5	277.2	259.1	303.4	242.8	242.1	221.5	194.3	64.0	34.8	2353.2
WY2002	194.2	91.4	341.5	609.2	506.8	373.5	596.8	315.8	14.0	9.9	8.6	6.6	3068.3
<u>Rainfall (inches)</u>													
Avg 1957-2002	4.03	3.99	4.10	2.79	3.27	4.18	4.28	4.43	3.78	2.90	2.27	3.56	43.58
WY2002	8.66	4.58	9.16	3.02	2.38	9.18	3.75	6.32	2.28	5.81	1.15	2.63	58.93
Deviation	4.63	0.59	5.06	0.23	-0.89	5.00	-0.53	1.89	-1.50	2.91	-1.12	-0.93	15.35
<u>Pool Elevation</u>													
End of month	225.47	222.93	239.17	231.09	227.36	230.42	232.60	227.62	226.86	226.43	225.53	224.96	
Maximum	227.23	225.13	239.48	238.98	230.88	230.42	234.31	232.28	227.61	227.03	226.39	225.52	
Minimum	224.52	221.87	223.16	231.09	227.36	224.94	230.78	227.43	226.80	226.43	225.53	224.96	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	244.15	175.32	832.98	434.06	301.13	407.19	497.94	309.33	285.90	272.80	245.89	229.86	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
FORT WORTH DISTRICT  
RED RIVER BASIN

LAKE O'THE PINES	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1958-2002	13.7	32.9	71.0	66.6	78.8	105.1	74.8	68.0	35.3	14.4	5.7	10.2	576.6
WY2002	53.5	20.8	206.6	38.1	51.1	173.6	127.4	29.1	7.5	3.8	0.0	4.1	715.6
<u>Release (1000 AF)</u>													
Avg 1957-2002	10.6	19.6	49.0	66.1	72.9	81.5	69.8	56.2	39.4	16.5	8.4	9.7	499.7
WY2002	28.8	56.4	77.9	164.7	58.3	33.0	165.6	84.3	4.0	3.2	3.2	3.0	682.3
<u>Rainfall (inches)</u>													
Avg 1979-2002	4.95	4.82	5.08	3.67	3.91	4.40	3.54	4.48	4.53	2.47	1.85	3.22	46.93
WY2002	6.55	5.45	5.29	1.54	2.76	7.82	2.80	4.07	3.44	5.13	0.68	3.70	49.23
Deviation	1.60	0.63	0.21	-2.13	-1.15	3.42	-0.74	-0.41	-1.09	2.66	-1.17	0.48	2.30
<u>Pool Elevation</u>													
End of month	231.40	229.42	235.17	229.11	228.56	235.00	233.06	230.13	229.99	229.61	228.73	228.39	
Maximum	232.77	231.22	236.21	234.97	229.09	235.00	236.44	232.82	230.12	230.09	229.57	228.71	
Minimum	230.43	228.51	229.40	229.10	228.56	228.62	233.06	230.10	229.82	229.61	228.73	228.37	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	298.38	258.60	383.04	252.64	242.43	378.70	334.11	272.52	269.55	262.09	245.50	239.27	

NECHES RIVER BASIN

SAM RAYBURN LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1908-2002	50.4	98.8	204.1	285.1	283.0	308.7	283.9	297.9	150.6	60.1	39.3	35.7	2097.6
WY2002	129.9	98.0	720.3	240.7	196.9	235.3	418.4	53.0	46.9	53.1	32.2	25.3	2250.1
<u>Release (1000 AF)</u>													
Avg 1965-2002	85.9	67.6	62.9	118.1	167.0	255.3	258.6	222.4	199.6	188.2	141.8	107.7	1875.0
WY2002	101.7	104.7	115.5	426.2	236.4	109.5	396.5	151.9	134.3	116.1	138.3	134.8	2165.7
<u>Rainfall (inches)</u>													
Avg 1969-2002	4.85	5.63	5.99	5.53	4.22	5.22	4.18	5.21	5.71	3.91	3.79	3.88	58.12
WY2002	5.03	6.62	7.61	3.41	2.89	4.43	2.96	1.50	4.15	3.44	4.84	2.89	49.77
Deviation	0.18	0.99	1.62	-2.12	-1.33	-0.79	-1.22	-3.71	-1.56	-0.47	1.05	-0.99	-8.35
<u>Pool Elevation</u>													
End of month	162.13	161.84	166.89	165.08	164.53	165.38	165.17	163.83	162.59	161.50	159.91	158.40	
Maximum	162.37	162.11	167.10	166.81	165.10	165.38	166.57	165.20	163.79	162.55	161.45	159.83	
Minimum	161.82	161.20	161.93	164.85	164.53	164.62	165.17	163.83	162.59	161.50	159.91	158.40	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	2644.10	2612.80	3191.00	2976.70	2911.90	3010.60	2986.00	2833.30	2695.40	2576.40	2411.30	2259.80	



SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
FORT WORTH DISTRICT  
NECHES RIVER BASIN

B.A. STEINHAGEN LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1908-2002	100.4	164.4	291.8	450.9	460.7	547.6	529.1	571.3	321.2	180.1	104.9	88.8	3811.2
WY2002	284.8	184.8	655.4	708.3	428.8	286.4	750.1	217.5	176.8	159.5	161.7	173.0	4187.2
<u>Release (1000 AF)</u>													
Avg 1951-2002	132.8	161.8	272.4	390.5	416.5	529.6	490.4	540.9	351.3	243.2	148.9	132.5	3810.7
WY2002	292.6	181.2	652.1	690.3	417.4	279.8	747.8	202.8	163.5	171.2	150.3	128.3	4077.3
<u>Rainfall (inches)</u>													
Avg 1969-2002	3.97	5.07	5.57	4.88	3.83	4.40	4.10	5.37	5.63	3.31	3.44	4.16	53.72
WY2002	6.86	9.55	7.89	2.38	4.28	2.28	3.51	0.28	4.00	8.44	4.03	3.09	56.59
Deviation	2.89	4.48	2.32	-2.50	0.45	-2.12	-0.59	-5.09	-1.63	5.13	0.59	-1.07	2.87
<u>Pool Elevation</u>													
End of month	76.72	76.51	76.47	78.45	79.30	79.55	79.28	80.00	80.52	78.32	78.80	82.35	
Maximum	78.56	76.91	79.75	78.45	79.58	80.32	79.93	80.14	81.11	81.00	78.80	82.69	
Minimum	76.26	75.97	76.12	76.16	78.36	79.35	78.83	79.20	79.99	78.23	78.17	79.69	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	32.56	31.17	30.85	45.43	52.66	55.04	52.48	59.23	64.45	44.37	48.36	85.65	

TRINITY RIVER BASIN

BENBROOK LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	4.0	3.6	6.4	7.7	11.1	14.8	8.3	2.5	1.8	1.6	3.3	2.6	67.8
WY2002	1.9	3.7	4.2	6.1	7.7	28.5	31.8	13.3	2.1	2.5	1.8	0.9	104.6
<u>Release (1000 AF)</u>													
Avg 1952-2002	1.2	4.8	2.9	4.4	4.3	10.3	6.5	12.7	11.8	3.1	1.2	1.0	64.1
WY2002	0.9	0.8	0.9	0.9	0.8	11.1	36.7	5.4	0.5	0.5	1.0	0.4	59.8
<u>Rainfall (inches)</u>													
Avg 1952-2002	3.47	2.31	2.19	1.73	2.03	2.69	3.54	4.60	3.13	2.12	2.08	3.05	32.93
WY2002	1.76	1.99	2.67	3.96	1.15	6.72	7.05	5.63	1.24	2.32	3.32	1.33	39.16
Deviation	-1.71	-0.31	0.48	2.24	-0.88	4.04	3.51	1.04	-1.89	0.21	1.24	-1.72	6.23
<u>Pool Elevation</u>													
End of month	688.14	688.68	689.46	690.82	692.55	696.71	694.08	694.10	692.88	691.92	690.50	689.10	
Maximum	688.37	688.68	689.49	690.82	692.55	697.38	698.77	695.39	694.07	693.01	691.88	690.43	
Minimum	688.14	688.10	688.71	689.43	690.93	692.58	694.08	693.80	692.82	691.92	690.50	689.10	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	65.84	67.55	70.04	74.51	80.46	96.17	85.89	86.00	81.62	78.26	73.44	68.88	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
FORT WORTH DISTRICT  
TRINITY RIVER BASIN

JOE POOL LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1987-2002	7.0	5.2	13.7	6.4	14.0	12.5	11.1	19.1	10.8	2.0	3.0	2.1	106.7
WY2002	3.0	1.1	10.6	10.8	8.8	22.9	13.2	13.6	3.3	4.6	2.1	0.7	94.5
<u>Release (1000 AF)</u>													
Avg 1986-2002	0.2	4.4	3.8	6.6	5.8	12.0	7.0	9.4	7.9	3.1	0.2	0.6	60.9
WY2002	0.3	0.1	4.5	0.3	16.6	8.0	21.5	10.0	0.3	0.3	0.3	0.1	62.4
<u>Rainfall (inches)</u>													
Avg 1985-2002	4.50	3.33	3.74	2.15	3.02	3.08	3.20	4.64	4.08	1.64	2.18	2.85	38.41
WY2002	2.93	1.53	4.32	3.61	1.93	4.96	2.83	3.91	1.49	4.07	2.56	1.49	35.63
Deviation	-1.57	-1.80	0.58	1.46	-1.09	1.88	-0.37	-0.73	-2.59	2.43	0.38	-1.36	-2.78
<u>Pool Elevation</u>													
End of month	521.85	521.69	522.29	523.38	522.06	523.71	522.23	522.21	522.03	521.94	521.40	520.83	
Maximum	522.14	521.87	523.08	523.38	523.50	523.71	523.77	523.61	522.20	522.36	521.91	521.39	
Minimum	521.76	521.68	521.64	522.02	522.06	521.99	522.18	522.19	521.90	521.94	521.40	520.83	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	175.78	174.59	178.99	187.40	177.34	189.90	178.62	178.47	177.12	176.45	172.45	168.28	

TRINITY RIVER BASIN

RAY ROBERTS LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	21.7	28.7	45.1	24.9	45.0	53.7	47.1	57.5	31.6	18.0	8.5	11.2	393.1
WY2002	7.6	2.5	13.6	11.0	14.2	125.1	99.6	18.4	24.8	13.8	5.0	1.0	336.5
<u>Release (1000 AF)</u>													
Avg 1952-2002	7.1	7.4	20.8	12.3	14.7	35.0	30.1	41.5	31.3	28.3	8.2	4.3	241.0
WY2002	1.5	1.4	1.5	1.5	1.3	45.2	90.2	31.1	14.5	6.0	1.0	0.3	195.5
<u>Rainfall (inches)</u>													
Avg 1952-2002	na	na	na	na	na	na	na	na	na	na	na	na	na
WY2002	na	na	na	na	na	na	na	na	na	na	na	na	na
Deviation	na	na	na	na	na	na	na	na	na	na	na	na	na
<u>Pool Elevation</u>													
End of month	631.03	630.75	630.93	631.04	631.29	633.79	633.76	632.92	632.71	632.37	631.81	631.35	
Maximum	631.35	631.03	631.05	631.04	631.39	634.64	635.48	633.66	633.36	632.78	632.36	631.79	
Minimum	631.01	630.75	630.69	630.81	631.09	631.23	633.49	632.82	632.69	632.37	631.81	631.35	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	757.25	749.41	754.44	757.81	764.87	838.05	837.14	811.86	805.93	795.94	779.71	766.28	

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LEWISVILLE LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	40.7	33.7	35.9	29.1	52.5	68.5	75.3	101.7	58.7	23.4	12.6	25.8	558.0
WY2002	17.0	5.4	16.0	32.9	19.7	239.1	205.9	83.3	38.1	25.0	6.5	4.4	693.4
<u>Release (1000 AF)</u>													
Avg 1952-2002	24.6	36.5	39.1	30.5	34.1	56.1	49.2	78.4	76.1	51.2	29.5	19.8	525.0
WY2002	14.6	12.4	12.1	11.3	8.0	49.5	213.4	100.7	23.2	20.1	22.1	17.6	504.8
<u>Rainfall (inches)</u>													
Avg 1952-2002	3.66	2.53	2.52	1.87	2.22	3.08	3.81	4.87	3.48	2.12	1.89	3.59	35.63
WY2002	1.45	0.75	2.87	5.11	1.18	7.90	4.12	4.03	1.57	2.85	0.44	0.93	33.20
Deviation	-2.21	-1.78	0.35	3.24	-1.04	4.82	0.31	-0.84	-1.91	0.73	-1.45	-2.66	-2.43
<u>Pool Elevation</u>													
End of month	517.83	517.10	516.91	517.48	517.65	524.04	523.38	522.28	522.09	521.51	520.04	518.85	
Maximum	518.45	517.82	517.20	517.48	518.02	524.04	525.53	523.19	522.44	522.23	521.47	519.99	
Minimum	517.83	517.10	516.82	516.35	517.59	517.38	523.26	522.28	522.06	521.51	520.04	518.85	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	526.25	508.18	503.46	517.43	521.96	702.82	682.21	649.00	643.65	626.29	584.31	552.63	

TRINITY RIVER BASIN

GRAPEVINE LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	11.3	8.0	10.0	9.8	17.0	19.0	23.8	31.8	17.9	5.3	1.8	5.1	160.9
WY2002	2.9	3.5	7.6	8.9	6.0	60.7	41.8	16.0	9.4	5.6	1.9	0.7	164.9
<u>Release (1000 AF)</u>													
Avg 1952-2002	4.4	8.2	11.5	9.8	8.8	13.2	13.8	16.9	19.5	14.3	11.1	4.7	136.2
WY2002	5.4	5.2	5.4	4.9	4.4	11.3	21.0	35.5	9.0	4.3	5.4	6.4	118.2
<u>Rainfall (inches)</u>													
Avg 1952-2002	3.50	2.52	2.38	1.85	2.22	2.95	3.85	4.98	3.13	2.22	1.88	3.32	34.79
WY2002	2.80	1.59	4.68	5.44	1.37	6.74	3.97	4.99	1.61	3.45	1.15	1.24	39.03
Deviation	-0.70	-0.93	2.30	3.59	-0.85	3.79	0.11	0.01	-1.52	1.23	-0.73	-2.08	4.23
<u>Pool Elevation</u>													
End of month	529.82	529.18	529.24	529.58	529.57	536.42	538.75	535.72	535.18	534.67	533.37	531.97	
Maximum	530.66	529.79	529.52	529.58	529.94	536.75	539.43	539.45	535.94	535.46	534.62	533.33	
Minimum	529.82	529.18	528.92	528.78	529.57	529.28	536.34	535.65	535.15	534.67	533.37	531.97	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	145.60	141.55	141.87	144.07	144.01	191.58	209.50	186.38	182.35	178.64	169.43	159.70	

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LAVON LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	17.2	25.0	34.0	28.9	45.5	49.1	55.0	71.5	38.9	13.5	4.2	11.3	394.1
WY2002	13.6	6.4	58.1	47.3	90.1	187.6	165.1	73.8	20.4	14.0	7.5	8.1	692.0
<u>Release (1000 AF)</u>													
Avg 1953-2002	7.9	10.5	18.3	21.3	21.0	34.7	29.5	57.7	36.8	16.1	6.3	3.9	264.1
WY2002	0.0	0.0	0.0	0.0	0.0	61.0	223.8	45.7	0.0	0.0	0.0	0.0	330.6
<u>Rainfall (inches)</u>													
Avg 1953-2002	3.91	3.11	3.00	2.18	2.64	3.32	4.07	5.34	3.69	2.31	1.98	3.94	39.50
WY2002	3.50	0.97	5.05	3.59	1.51	5.33	3.69	4.21	1.12	4.47	1.71	1.71	36.88
Deviation	-0.41	-2.14	2.05	1.41	-1.13	2.02	-0.38	-1.13	-2.57	2.17	-0.27	-2.23	-2.62
<u>Pool Elevation</u>													
End of month	484.58	483.60	485.87	487.48	491.16	495.97	492.37	492.36	491.56	490.34	488.38	486.82	
Maximum	485.38	484.55	485.98	487.48	491.27	496.58	497.59	493.38	492.33	491.59	490.30	488.32	
Minimum	484.58	483.60	483.34	485.68	488.83	491.14	492.37	492.36	491.56	490.34	488.38	486.82	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	314.02	297.53	336.89	366.21	438.83	546.47	464.48	464.04	446.99	421.82	383.27	354.15	

TRINITY RIVER BASIN

NAVARRO MILLS LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1907-2002	6.3	7.1	12.2	10.3	12.2	13.8	16.7	27.1	13.9	3.2	1.9	2.7	127.3
WY2002	12.9	5.6	59.7	3.5	9.2	6.3	5.6	5.9	1.6	2.8	0.4	1.1	114.6
<u>Release (1000 AF)</u>													
Avg 1962-2002	2.2	7.5	8.8	11.0	9.8	12.7	12.4	14.7	18.0	5.2	1.4	1.0	104.7
WY2002	0.0	0.4	19.1	41.9	8.2	0.8	6.4	0.1	0.0	1.0	0.0	0.0	77.9
<u>Rainfall (inches)</u>													
Avg 1962-2002	4.33	3.25	3.14	2.14	2.65	3.07	3.34	5.07	3.16	1.76	2.29	3.16	37.37
WY2002	2.42	3.73	6.87	0.50	2.09	1.99	1.28	4.22	1.78	5.52	0.36	2.71	33.47
Deviation	-1.91	0.48	3.73	-1.64	-0.56	-1.08	-2.06	-0.85	-1.38	3.76	-1.93	-0.45	-3.90
<u>Pool Elevation</u>													
End of month	424.40	424.97	431.23	424.72	424.59	425.33	424.72	425.22	424.85	424.48	423.66	423.15	
Maximum	424.56	425.08	433.44	430.72	425.99	425.33	425.61	425.22	425.22	425.11	424.44	423.64	
Minimum	422.11	424.32	424.94	424.65	424.59	424.53	424.72	424.42	424.75	424.48	423.66	423.15	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	56.41	59.31	98.00	58.08	57.42	61.19	58.08	60.66	58.70	56.81	52.78	50.26	

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<u>BARDWELL LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1938-2002	4.1	3.5	7.4	5.5	8.2	8.4	10.2	13.1	7.8	1.7	0.9	1.8	72.6
WY2002	5.5	1.5	23.6	3.4	9.9	10.3	12.6	6.2	1.5	2.7	0.0	0.0	77.2
<u>Release (1000 AF)</u>													
Avg 1966-2002	1.1	4.6	5.5	7.9	6.2	10.2	7.8	9.7	11.7	1.5	0.2	0.4	66.8
WY2002	0.0	0.0	8.8	13.1	11.5	3.0	16.0	4.2	0.0	0.7	0.0	0.0	57.3
<u>Rainfall (inches)</u>													
Avg 1965-2002	4.35	3.19	3.23	2.40	2.89	3.22	3.35	4.97	3.50	2.09	2.13	3.44	38.77
WY2002	4.58	3.07	8.21	1.30	2.07	1.98	1.46	4.33	2.22	1.99	1.09	1.66	33.96
Deviation	0.23	-0.12	4.98	-1.10	-0.82	-1.24	-1.89	-0.64	-1.28	-0.10	-1.04	-1.78	-4.81
<u>Pool Elevation</u>													
End of month	420.68	420.78	424.50	421.73	421.02	422.78	421.43	421.42	421.23	420.95	419.98	419.21	
Maximum	420.82	420.85	426.54	424.02	422.77	422.78	423.08	421.75	421.42	421.55	420.92	419.95	
Minimum	419.27	420.66	420.78	421.10	421.02	421.03	421.29	421.19	421.15	420.95	419.98	419.21	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	45.46	45.78	59.52	48.94	46.56	52.84	47.86	47.86	47.23	46.34	43.34	41.01	

BRAZOS RIVER BASIN

<u>WHITNEY LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1899-2002	106.9	62.6	73.9	55.2	73.5	84.8	132.6	257.6	171.3	85.9	65.9	96.0	1266.3
WY2002	11.8	19.6	34.4	27.3	37.6	134.9	92.2	77.0	13.9	40.2	9.9	13.5	512.2
<u>Release (1000 AF)</u>													
Avg 1951-2002	74.5	52.2	45.1	64.6	59.5	98.5	71.8	189.5	177.0	69.1	51.2	54.5	1007.5
WY2002	16.1	20.1	13.1	19.4	22.4	10.5	69.1	43.5	15.6	45.8	62.1	28.9	366.5
<u>Rainfall (inches)</u>													
Avg 1952-2002	3.45	2.57	2.39	1.87	2.15	2.52	3.42	4.49	3.36	2.05	2.21	3.04	33.52
WY2002	3.01	4.24	3.80	0.69	2.08	2.50	1.51	3.48	0.61	4.72	0.05	1.99	28.68
Deviation	-0.44	1.67	1.41	-1.18	-0.07	-0.02	-1.91	-1.01	-2.75	2.67	-2.16	-1.05	-4.84
<u>Pool Elevation</u>													
End of month	524.95	524.60	525.60	525.86	526.45	532.14	532.76	533.67	533.08	532.26	529.12	527.82	
Maximum	525.81	524.96	525.66	525.86	526.79	532.14	534.03	534.00	533.56	533.41	532.11	529.06	
Minimum	524.95	524.27	524.08	525.00	525.90	526.26	532.36	532.77	532.94	532.26	529.12	527.82	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	460.15	454.28	471.78	476.47	487.32	607.05	621.67	643.23	628.95	610.04	540.33	513.58	

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<u>AQUILLA LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1982-2002	5.1	3.8	14.0	5.7	11.5	11.5	7.4	9.7	9.7	1.1	1.5	1.4	82.4
WY2002	3.4	6.0	18.5	2.2	6.4	12.2	3.7	2.4	0.8	0.5	0.2	0.6	56.9
<u>Release (1000 AF)</u>													
Avg 1982-2002	0.8	2.9	7.5	7.7	6.8	11.7	5.7	8.8	9.3	1.1	0.6	0.2	63.0
WY2002	0.1	0.1	14.3	3.4	6.8	1.3	10.9	0.4	0.1	0.1	0.1	0.1	37.8
<u>Rainfall (inches)</u>													
Avg 1984-2002	na	na	na	na	na	na	na	na	na	na	na	na	na
WY2002	na	na	na	na	na	na	na	na	na	na	na	na	na
Deviation	na	na	na	na	na	na	na	na	na	na	na	na	na
<u>Pool Elevation</u>													
End of month	536.04	537.57	538.53	537.89	537.50	540.35	537.94	538.02	537.63	537.15	536.34	535.89	
Maximum	536.37	537.73	542.36	538.33	539.28	540.35	540.26	538.06	537.99	537.67	537.12	536.31	
Minimum	535.17	535.98	537.56	537.51	537.50	537.47	537.94	537.45	537.53	537.15	536.34	535.89	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	41.47	46.28	49.47	47.34	46.06	55.99	47.51	47.78	46.48	44.93	42.41	41.06	

BRAZOS RIVER BASIN

<u>WACO LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1907-2002	22.0	15.4	26.0	19.7	30.8	33.1	44.2	65.7	33.7	12.0	8.7	15.0	326.4
WY2002	7.5	33.0	47.1	24.0	40.3	39.2	37.2	12.5	6.4	19.6	5.3	2.3	274.5
<u>Release (1000 AF)</u>													
Avg 1965-2002	5.3	10.6	19.3	28.2	28.3	50.1	32.3	58.7	35.0	8.3	4.5	5.0	285.7
WY2002	1.2	4.7	49.4	15.5	47.8	27.2	37.9	6.3	5.7	2.6	1.9	1.2	201.6
<u>Rainfall (inches)</u>													
Avg 1962-2002	3.56	2.88	2.59	2.12	2.59	2.77	3.15	4.72	3.05	2.12	2.34	3.37	35.26
WY2002	2.63	4.77	3.86	0.90	2.18	2.60	1.20	3.31	2.43	4.30	1.03	2.82	32.03
Deviation	-0.93	1.89	1.27	-1.22	-0.41	-0.17	-1.95	-1.41	-0.62	2.18	-1.31	-0.55	-3.23
<u>Pool Elevation</u>													
End of month	453.46	456.80	455.97	456.61	455.13	456.20	455.41	455.35	454.45	455.61	454.66	453.66	
Maximum	453.67	456.80	459.71	456.61	457.27	456.89	456.75	455.38	455.50	455.61	455.61	454.61	
Minimum	453.22	453.34	455.43	455.18	455.13	455.02	455.03	455.02	454.45	454.46	454.66	453.66	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	134.07	158.15	151.92	156.66	145.86	153.69	147.90	147.38	140.98	149.35	142.40	135.45	

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FORT WORTH DISTRICT  
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PROCTOR LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1922-2002	4.4	2.5	4.2	4.2	6.1	7.4	10.2	17.6	12.2	4.3	4.1	3.8	81.1
WY2002	0.0	0.5	0.4	0.2	0.0	4.9	0.8	13.4	2.7	28.3	0.1	0.0	51.3
<u>Release (1000 AF)</u>													
Avg 1963-2002	3.0	3.9	3.9	5.5	5.5	8.5	11.6	20.6	19.1	19.3	10.5	6.0	117.5
WY2002	0.7	0.4	0.2	0.2	0.2	0.2	0.3	0.9	1.6	16.2	1.1	0.7	22.7
<u>Rainfall (inches)</u>													
Avg 1963-2002	3.02	2.16	1.66	1.49	1.99	2.21	2.82	4.75	3.59	1.77	2.36	3.31	31.12
WY2002	1.05	3.23	1.86	0.77	1.61	4.24	1.04	5.37	4.78	7.31	0.87	2.08	34.21
Deviation	-1.97	1.07	0.20	-0.72	-0.38	2.03	-1.78	0.62	1.19	5.54	-1.49	-1.23	3.09
<u>Pool Elevation</u>													
End of month	1157.80	1157.50	1157.40	1157.20	1156.90	1157.90	1157.70	1160.40	1160.10	1162.20	1161.20	1160.40	
Maximum	1158.40	1157.70	1157.60	1157.40	1157.20	1157.90	1158.00	1160.40	1160.60	1164.50	1162.20	1161.10	
Minimum	1157.80	1157.50	1157.40	1157.20	1156.90	1156.60	1157.70	1157.70	1160.00	1160.10	1161.20	1160.40	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	38.09	37.29	36.79	36.06	34.99	38.71	37.91	48.54	47.28	56.61	51.86	48.42	

BRAZOS RIVER BASIN

BELTON LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1908-2002	28.2	21.0	35.5	32.5	43.0	45.4	62.7	98.2	53.9	26.3	16.0	24.5	487.2
WY2002	5.1	34.0	42.7	22.7	47.6	33.1	38.1	9.9	12.2	60.1	4.0	3.5	313.1
<u>Release (1000 AF)</u>													
Avg 1954-2002	17.6	18.2	20.0	31.9	27.6	56.6	52.2	64.3	63.5	48.9	20.1	11.6	432.5
WY2002	4.4	19.4	41.0	8.3	53.0	18.5	39.6	2.1	2.0	43.4	2.3	2.8	236.7
<u>Rainfall (inches)</u>													
Avg 1953-2002	na	na	na	na	na	na	na	na	na	na	na	na	na
WY2002	na	na	na	na	na	na	na	na	na	na	na	na	na
Deviation	na	na	na	na	na	na	na	na	na	na	na	na	na
<u>Pool Elevation</u>													
End of month	593.55	594.41	594.17	594.91	594.06	594.74	594.05	593.83	593.78	594.23	593.29	592.47	
Maximum	593.90	595.73	596.53	594.91	595.76	595.16	595.03	594.05	593.81	596.18	594.20	593.25	
Minimum	593.55	593.37	594.17	594.11	594.06	594.08	594.05	593.61	593.50	593.89	593.29	592.47	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	428.92	439.68	436.69	445.98	435.32	443.83	435.20	432.36	431.74	437.31	425.87	415.88	

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STILLHOUSE HOLLOW	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	11.9	9.4	15.8	16.4	26.1	26.9	25.4	41.4	17.7	10.5	4.4	8.9	214.7
WY2002	3.0	32.8	21.5	37.7	43.6	70.3	36.0	33.6	8.5	3.8	13.1	8.3	312.3
<u>Release (1000 AF)</u>													
Avg 1966-2002	4.8	6.7	8.7	18.5	17.7	25.1	26.0	29.7	23.3	22.3	5.0	3.8	191.6
WY2002	0.1	27.6	17.1	12.3	24.9	4.5	10.6	0.1	0.1	71.1	6.6	0.1	175.0
<u>Rainfall (inches)</u>													
Avg 1966-2002	3.51	2.73	2.48	1.89	2.44	2.55	2.77	4.68	3.48	1.96	2.41	3.62	34.52
WY2002	2.25	5.92	3.39	0.86	1.46	1.52	1.40	2.43	3.68	4.86	0.11	1.46	29.34
Deviation	-1.26	3.19	0.91	-1.03	-0.98	-1.03	-1.37	-2.25	0.20	2.90	-2.30	-2.16	-5.18
<u>Pool Elevation</u>													
End of month	621.94	622.40	622.85	622.96	622.19	622.59	622.08	622.28	622.48	622.64	621.99	621.72	
Maximum	622.09	625.63	623.36	622.96	623.27	622.59	622.62	622.28	622.48	627.70	622.59	621.98	
Minimum	621.83	621.90	622.37	622.41	622.06	622.19	622.07	621.74	622.20	622.64	621.99	621.72	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	225.71	228.67	231.53	232.32	227.32	229.91	226.61	227.90	229.13	230.17	226.03	224.24	

BRAZOS RIVER BASIN

GEORGETOWN LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1980-2002	5.6	5.0	11.0	7.4	12.9	12.1	6.6	12.6	21.1	9.1	1.8	3.7	108.7
WY2002	0.9	18.2	4.7	3.0	2.2	1.8	1.8	0.7	4.1	35.4	2.9	2.7	78.4
<u>Release (1000 AF)</u>													
Avg 1979-2002	0.8	1.2	2.6	3.2	4.8	8.5	5.1	5.4	8.4	9.7	0.4	1.4	51.3
WY2002	0.2	4.7	6.9	2.3	1.2	0.2	0.2	0.2	0.2	27.1	0.8	0.9	45.0
<u>Rainfall (inches)</u>													
Avg 1980-2002	3.90	3.56	2.78	1.87	2.45	2.98	2.67	4.82	4.34	1.52	1.90	3.17	35.97
WY2002	2.90	6.09	3.86	0.83	1.04	1.29	0.75	2.11	3.25	5.42	0.43	3.90	31.87
Deviation	-1.00	2.53	1.08	-1.04	-1.41	-1.69	-1.92	-2.71	-1.09	3.90	-1.47	0.73	-4.10
<u>Pool Elevation</u>													
End of month	785.09	794.40	791.89	791.33	791.11	791.06	790.69	788.26	789.09	793.52	792.42	791.92	
Maximum	786.24	797.16	794.07	791.79	791.43	791.18	791.36	790.63	789.09	804.71	793.48	792.92	
Minimum	785.09	784.49	791.40	791.32	791.11	791.01	790.69	788.26	786.08	790.32	792.42	791.92	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)													
	29.83	41.63	38.18	37.45	37.16	37.10	36.62	33.58	34.60	40.41	38.89	38.22	



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GRANGER LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1980-2002	9.4	11.3	20.5	15.2	22.2	23.2	18.4	26.4	29.4	14.9	3.5	6.1	200.5
WY2002	4.4	47.8	43.3	14.3	10.5	8.2	7.0	3.9	4.0	71.4	6.3	5.6	226.8
<u>Release (1000 AF)</u>													
Avg 1979-2002	4.6	9.9	13.4	15.8	15.9	23.6	18.5	23.7	24.6	24.6	2.2	4.1	180.8
WY2002	3.2	39.2	46.6	15.4	9.7	6.1	5.3	2.6	1.1	67.5	3.4	2.4	202.6
<u>Rainfall (inches)</u>													
Avg 1980-2002	3.49	2.92	3.26	1.97	2.20	2.60	2.04	4.94	4.22	1.27	1.72	3.09	33.72
WY2002	2.17	4.23	6.14	0.69	1.23	1.94	1.62	2.15	3.91	3.30	0.44	1.91	29.73
Deviation	-1.32	1.31	2.88	-1.28	-0.97	-0.66	-0.42	-2.79	-0.31	2.03	-1.28	-1.18	-3.99
<u>Pool Elevation</u>													
End of month	504.09	505.73	504.74	504.24	504.15	504.33	504.35	504.09	504.21	504.42	504.33	504.48	
Maximum	504.55	511.17	508.15	504.72	504.49	504.57	504.59	504.54	504.21	509.31	504.42	504.81	
Minimum	504.08	504.11	504.40	504.12	504.11	504.20	504.10	503.91	503.78	504.39	504.11	504.29	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	54.69	61.96	57.44	55.31	54.94	55.68	55.72	54.69	55.14	56.02	55.68	56.31	

BRAZOS RIVER BASIN

SOMERVILLE LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1924-2002	15.9	16.5	21.1	24.1	26.3	21.1	25.3	35.2	25.6	10.5	3.9	9.4	234.9
WY2002	19.3	30.0	69.0	9.7	11.7	3.2	9.7	3.0	5.8	14.6	5.3	3.4	184.7
<u>Release (1000 AF)</u>													
Avg 1966-2002	7.6	11.7	17.7	21.5	23.9	25.3	21.8	28.1	27.8	21.4	7.1	4.0	218.0
WY2002	15.9	20.2	34.0	43.8	12.1	0.0	4.9	0.0	0.0	3.8	0.0	0.0	134.7
<u>Rainfall (inches)</u>													
Avg 1966-2002	4.13	3.36	2.93	2.80	2.58	2.73	2.97	4.55	3.86	1.68	2.52	3.93	38.05
WY2002	3.90	3.09	2.35	0.81	1.63	1.04	1.58	1.16	2.25	3.96	3.56	1.56	26.89
Deviation	-0.23	-0.27	-0.58	-1.99	-0.95	-1.68	-1.39	-3.39	-1.61	2.28	1.04	-2.37	-11.15
<u>Pool Elevation</u>													
End of month	237.98	238.56	241.18	238.24	238.00	238.00	238.05	237.75	237.74	238.11	237.94	237.69	
Maximum	239.20	239.74	242.41	241.02	238.61	238.26	238.25	238.05	237.75	238.50	238.16	237.94	
Minimum	237.98	237.96	238.27	238.12	238.00	237.89	237.98	237.63	237.55	237.79	237.81	237.69	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	154.94	161.66	194.10	157.82	155.06	155.17	155.74	152.33	152.22	156.43	154.49	151.54	

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TWIN BUTTES LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1963-2002	5.3	3.2	3.3	28.7	4.2	3.9	4.9	6.5	4.3	2.4	6.2	6.5	79.3
WY2002	5.7	0.7	0.3	0.9	1.2	1.2	2.7	0.3	0.0	0.0	5.7	1.4	20.2
<u>Release (1000 AF)</u>													
Avg 1962-2002	1.4	1.2	1.2	0.8	1.3	2.1	2.9	4.0	3.7	5.9	4.6	1.7	30.8
WY2002	1.7	0.3	0.4	0.3	0.0	0.3	0.4	1.0	3.1	1.4	1.3	0.4	10.5
<u>Rainfall (inches)</u>													
Avg 1963-2002	1.55	1.09	0.67	0.53	1.01	0.76	1.32	2.25	1.79	0.79	1.70	2.34	15.80
WY2002	2.08	2.16	0.25	0.81	1.45	0.65	0.33	1.43	0.03	0.22	2.63	0.32	12.37
Deviation	0.53	1.07	-0.42	0.28	0.45	-0.11	-0.99	-0.82	-1.76	-0.57	0.93	-2.02	-3.43
<u>Pool Elevation</u>													
End of month	1890.20	1890.60	1890.30	1890.90	1892.00	1892.70	1894.50	1893.20	1888.90	1886.00	1890.80	1891.20	
Maximum	1890.60	1890.70	1890.50	1890.90	1892.00	1892.80	1895.10	1894.50	1893.20	1888.80	1890.80	1892.00	
Minimum	1884.60	1889.90	1890.10	1890.30	1890.90	1892.00	1892.70	1893.20	1888.90	1886.00	1883.50	1891.00	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	7.80	8.08	7.86	8.36	9.37	10.00	11.87	10.58	6.70	4.42	8.25	8.62	

COLORADO RIVER BASIN

O.C. FISHER LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
<u>Inflow (1000 AF)</u>													
Avg 1915-2002	3.3	0.4	0.4	0.3	0.6	1.1	3.3	4.9	2.5	2.6	1.4	6.0	26.8
WY2002	0.4	1.0	0.4	0.5	0.4	0.5	0.4	0.2	0.4	2.6	0.3	0.5	7.7
<u>Release (1000 AF)</u>													
Avg 1952-2002	1.1	0.2	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.4	0.4	0.2	3.6
WY2002	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.8	5.7
<u>Rainfall (inches)</u>													
Avg 1952-2002	2.37	1.23	0.87	0.78	1.15	1.01	1.85	3.05	2.36	1.68	2.05	2.79	21.18
WY2002	1.80	3.47	0.15	0.45	1.27	2.07	0.03	1.27	3.56	4.99	0.35	0.86	20.27
Deviation	-0.57	2.24	-0.72	-0.33	0.12	1.06	-1.82	-1.78	1.20	3.31	-1.70	-1.93	-0.91
<u>Pool Elevation</u>													
End of month	1860.90	1861.80	1861.60	1861.50	1861.20	1861.00	1860.50	1859.50	1858.70	1862.40	1860.80	1859.50	
Maximum	1861.50	1861.90	1861.80	1861.60	1861.50	1861.20	1861.00	1860.50	1859.40	1863.20	1862.40	1860.70	
Minimum	1860.90	1860.80	1861.60	1861.50	1861.20	1860.90	1860.50	1859.50	1858.70	1858.70	1860.80	1859.50	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	4.11	4.59	4.46	4.38	4.26	4.14	3.91	3.39	3.05	4.92	4.05	3.43	

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<u>HORDS CREEK LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1942-2002	0.3	0.1	0.2	0.1	0.2	0.3	0.4	0.9	0.5	0.2	0.1	0.3	3.6
WY2002	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	1.3
<u>Release (1000 AF)</u>													
Avg 1951-2002	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.3	0.2	0.0	0.0	0.0	1.1
WY2002	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
<u>Rainfall (inches)</u>													
Avg 1948-2002	2.50	1.62	1.11	1.14	1.37	1.52	2.32	3.72	3.23	1.93	2.00	3.08	25.54
WY2002	0.53	3.58	0.28	0.73	1.51	2.82	0.36	1.79	2.06	7.23	0.26	2.66	23.81
Deviation	-1.97	1.96	-0.83	-0.41	0.14	1.30	-1.96	-1.93	-1.17	5.30	-1.74	-0.42	-1.73
<u>Pool Elevation</u>													
End of month	1886.70	1886.60	1886.20	1885.90	1885.60	1885.50	1885.10	1884.40	1883.90	1884.70	1883.70	1883.20	
Maximum	1887.30	1886.80	1886.60	1886.20	1886.00	1885.60	1885.50	1885.00	1884.40	1885.10	1884.60	1883.70	
Minimum	1886.70	1886.50	1886.20	1885.90	1885.60	1885.30	1885.10	1884.40	1883.80	1883.80	1883.70	1883.20	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	3.26	3.23	3.15	3.07	2.99	2.97	2.87	2.72	2.60	2.78	2.57	2.48	

COLORADO RIVER BASIN

<u>MARSHALL FORD LAKE</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1941-2002	113.0	64.1	72.0	76.8	96.9	102.8	116.7	207.5	182.3	87.9	78.5	102.2	1300.7
WY2002	113.3	504.3	58.0	99.8	86.8	148.0	104.4	115.6	23.9	32.6	39.6	44.1	1370.4
<u>Release (1000 AF)</u>													
Avg 1943-2002	58.8	49.0	50.9	56.1	71.2	93.9	105.5	156.5	185.8	132.5	108.1	85.2	1153.6
WY2002	20.3	3.5	39.3	71.1	122.8	120.1	114.7	112.5	80.3	84.0	78.9	41.3	888.8
<u>Rainfall (inches)</u>													
Avg 1951-2002	3.25	2.21	1.58	1.36	1.89	1.92	2.50	4.14	3.38	1.71	2.16	3.01	29.11
WY2002	4.17	6.90	2.85	3.12	1.02	5.96	1.17	3.56	1.05	0.40	5.10	2.94	38.24
Deviation	0.92	4.69	1.27	1.76	-0.87	4.04	-1.33	-0.58	-2.33	-1.31	2.94	-0.07	9.13
<u>Pool Elevation</u>													
End of month	648.59	681.08	681.86	683.13	680.94	682.10	681.09	680.67	676.89	673.00	669.81	669.46	
Maximum	648.59	681.08	682.42	683.16	683.04	682.21	682.01	682.05	680.58	676.85	672.93	670.46	
Minimum	640.24	648.81	681.19	681.75	680.85	680.60	680.80	680.67	676.89	673.00	669.60	669.46	
<u>Pool Content (EOM)</u>													
(1000 Ac-Ft)	669.05	1167.00	1181.60	1205.80	1164.50	1186.10	1167.30	1159.50	1090.80	1022.90	969.48	963.76	

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002  
FORT WORTH DISTRICT  
GUADALUPE RIVER BASIN

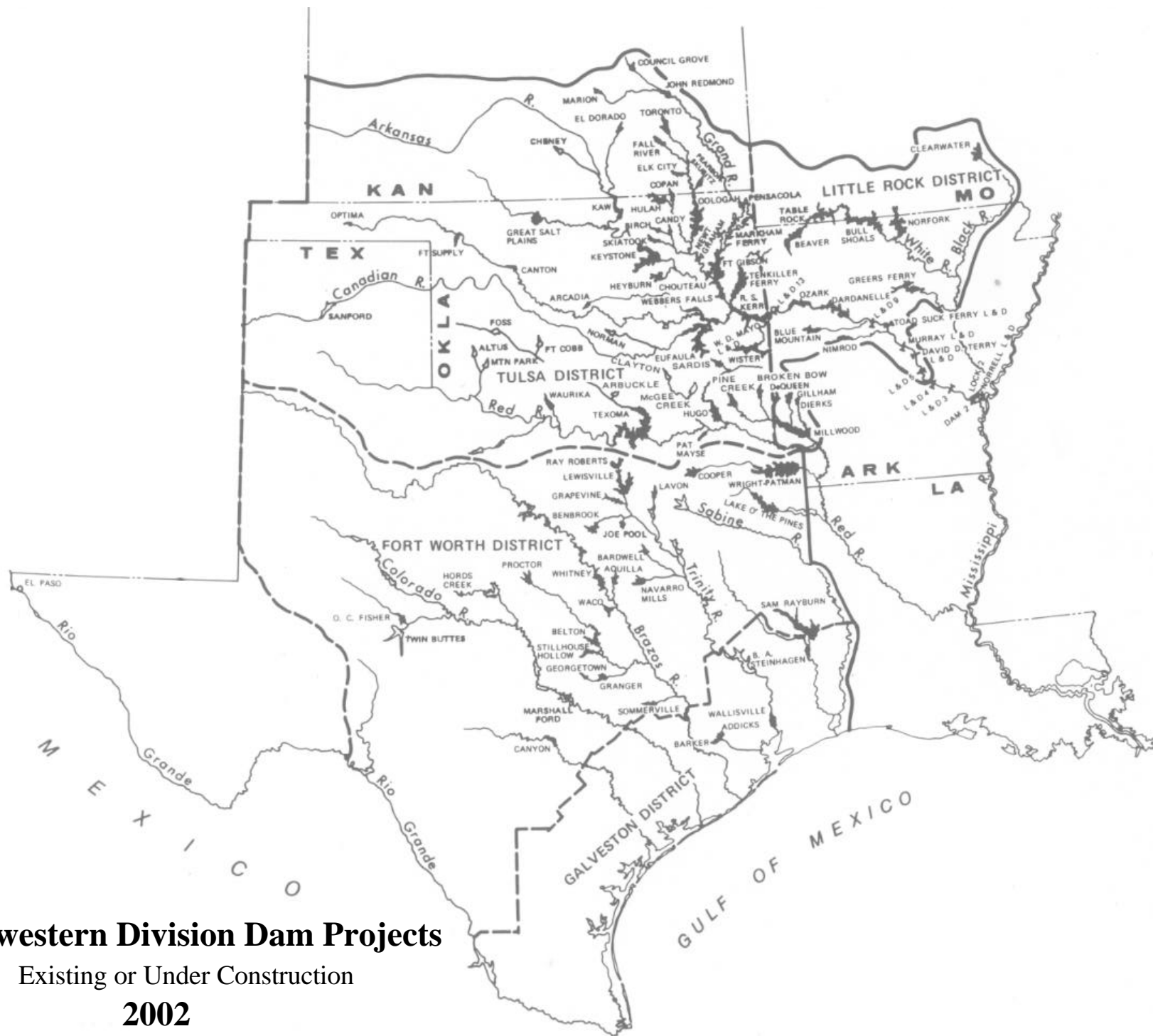
CANYON LAKE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Inflow (1000 AF)													
Avg 1915-2002	30.7	19.6	22.2	22.1	24.0	26.8	30.7	39.2	38.0	33.0	18.4	24.8	329.5
WY2002	32.0	145.4	64.5	34.1	21.5	18.5	16.6	11.4	21.8	862.3	76.7	47.2	1352.0
Release (1000 AF)													
Avg 1958-2002	16.6	23.2	20.2	24.2	20.8	27.5	26.8	26.8	32.4	44.4	30.5	20.7	314.0
WY2002	32.0	113.2	88.1	35.3	21.2	14.9	12.7	10.6	9.1	500.0	255.2	220.7	1312.9
Rainfall (inches)													
Avg 1962-2002	3.93	2.89	2.15	1.91	1.94	2.14	2.77	4.30	3.87	2.22	2.77	3.73	34.62
WY2002	2.70	4.93	4.17	0.84	0.69	1.54	1.92	2.20	6.85	16.75	1.02	5.11	48.72
Deviation	-1.23	2.04	2.02	-1.07	-1.25	-0.60	-0.85	-2.10	2.98	14.53	-1.75	1.38	14.10
Pool Elevation													
End of month	909.23	912.75	909.79	909.37	909.12	909.29	909.43	909.04	909.99	943.85	928.17	909.34	
Maximum	910.81	920.22	912.42	909.78	909.30	909.29	909.48	909.41	909.99	949.29	943.83	927.31	
Minimum	909.21	908.97	909.77	909.28	909.12	909.06	909.24	908.90	908.33	914.53	928.17	908.87	
Pool Content (EOM)	383.90	413.74	388.47	384.97	382.99	384.31	385.47	382.33	390.23	747.66	561.88	384.81	
(1000 Ac-Ft)													

SUMMARY OF LAKE CONDITIONS FOR WATER YEAR 2002

GALVESTON DISTRICT  
SAN JACINTO RIVER BASIN

<u>BARKER RESERVOIR</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1945-2002	7.1	7.6	8.0	9.7	8.5	6.1	6.1	8.2	10.1	6.2	4.6	8.2	90.3
WY2002	19.4	3.9	17.2	3.7	6.0	2.7	13.7	2.0	3.0	7.9	11.7	12.5	103.6
<u>Release (1000 AF)</u>													
Avg 1964-2002	7.9	8.4	8.3	9.0	9.0	8.2	6.7	9.1	9.4	6.6	4.3	9.0	95.8
WY2002	18.2	3.8	15.8	3.7	6.0	2.7	12.9	2.0	3.0	7.4	11.2	12.2	98.7
<u>Rainfall (inches)</u>													
Avg 1945-2002	3.90	3.61	3.23	3.32	2.91	3.30	3.12	4.26	4.12	2.93	3.61	4.22	42.54
WY2002	4.50	2.65	5.12	0.83	0.90	1.29	3.07	1.36	2.96	4.22	8.18	4.15	39.23
<u>Pool Elevation</u>													
End of month	74.01	74.44	73.85	74.43	73.79	74.48	80.54	73.68	76.94	73.78	73.67	73.83	
Maximum	88.94	83.06	88.28	77.29	75.20	74.48	87.97	82.96	76.94	85.63	86.94	86.00	
Minimum	73.81	73.80	73.85	73.79	73.77	73.79	72.08	72.70	73.64	73.43	73.67	73.68	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	

<u>ADDICKS RESERVOIR</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>TOTAL</u>
<u>Inflow (1000 AF)</u>													
Avg 1948-2002	8.3	7.9	8.4	7.6	8.0	5.5	6.3	8.3	8.5	5.2	5.9	7.5	87.4
WY2002	25.6	6.4	16.1	4.9	5.6	3.8	12.6	2.7	3.6	5.5	15.2	10.7	112.6
<u>Release (1000 AF)</u>													
Avg 1964-2002	9.0	9.7	9.0	8.4	8.2	7.2	6.6	9.8	9.3	6.3	4.7	8.5	96.6
WY2002	24.9	6.4	15.7	4.8	5.6	3.8	12.1	2.9	3.7	5.8	15.7	10.6	111.8
<u>Rainfall (inches)</u>													
Avg 1948-2002	4.08	3.54	3.30	3.31	3.03	2.57	3.15	4.08	4.08	2.93	3.31	4.32	42.81
WY2002	4.50	2.65	5.12	0.83	0.88	1.29	3.07	1.36	2.96	4.22	8.53	4.15	39.56
<u>Pool Elevation</u>													
End of month	72.63	72.67	72.18	72.11	72.03	72.87	80.24	71.63	74.59	71.94	71.88	71.71	
Maximum	93.26	83.20	91.27	77.91	73.63	72.87	90.85	83.09	77.60	87.61	91.66	86.73	
Minimum	72.10	72.06	72.18	71.99	72.03	71.86	72.08	71.62	71.40	71.63	71.77	71.71	
<u>Pool Content (EOM)</u> (1000 Ac-Ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	



## Southwestern Division Dam Projects

Existing or Under Construction

**2002**

(With Section 7 Flood Control Projects Added)